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SALES CONFERENCE NUMBER

EDISON BULLETIN

APRIL, 1939

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FARM SERVICE

Number and Percentage of Farms Receiving Electric Service

AS OF DECEMBER 31, 1938

State	Total all Occupied Farms * (A)	Farms with Dwellings Valued Under $500** (B)	Farms with Dwellings Valued Over $500 (C)	Farms Receiving Electric Service (D)	Percentage Electrified D/A (E)	Percentage Electrified D/C (F)
United States	**6,422,088**	**2,093,996**	**4,328,092**	**1,406,579**	**21.9**	**32.5**
Maine	40,092	4,609	35,483	18,200	45.4	51.3
New Hampshire	17,147	871	16,276	10,143	59.2	62.3
Vermont	25,741	1,768	23,973	9,008	35.0	37.6
Massachusetts	33,092	611	32,481	21,492	64.9	66.2
Rhode Island	4,078	81	3,997	4,000	98.1	100.1
Connecticut	29,508	352	29,156	21,000	71.2	72.0
New England	**149,658**	**8,292**	**141,366**	**83,843**	**56.0**	**59.3**
New York	168,269	6,175	162,094	93,332	55.5	57.6
New Jersey	28,818	462	28,356	21,200	73.6	74.8
Pennsylvania	186,127	9,459	176,668	96,034	51.6	54.4
Middle Atlantic	**383,214**	**16,096**	**367,118**	**210,566**	**54.9**	**57.4**
Ohio	244,451	20,608	223,843	104,384	42.7	46.6
Indiana	193,461	22,657	170,804	66,447	34.3	38.9
Illinois	225,093	21,036	204,057	58,898	26.2	28.9
Michigan	188,827	16,111	172,716	103,712	54.9	60.0
Wisconsin	194,765	14,091	180,674	67,590	34.7	37.4
East North Central	**1,046,597**	**94,503**	**952,094**	**401,031**	**38.3**	**42.1**
Minnesota	196,621	18,864	177,757	21,910	11.1	12.3
Iowa	214,484	7,317	207,167	46,973	21.9	22.7
Missouri	267,176	63,887	203,289	33,423	12.5	16.4
North Dakota	77,193	10,977	66,216	3,449	4.5	5.2
South Dakota	78,359	13,684	64,675	3,380	4.3	5.2
Nebraska	128,814	10,614	118,200	15,982	12.4	13.5
Kansas	162,992	24,093	138,899	20,423	12.5	14.7
West North Central	**1,125,639**	**149,436**	**976,203**	**145,540**	**12.9**	**14.9**
Delaware	10,134	697	9,437	3,045	30.0	32.3
Maryland—District of Columbia	42,990	5,069	37,921	16,765	39.0	44.2
Virginia	186,892	54,929	131,963	28,140	15.1	21.3
West Virginia	100,409	28,753	71,656	13,163	13.1	18.4
North Carolina	280,716	125,697	155,019	37,883	13.5	24.4
South Carolina	154,720	96,683	58,037	17,098	11.1	29.5
Georgia	236,501	151,257	85,244	21,157	8.9	24.8
Florida	59,726	23,900	35,826	10,692	17.9	29.8
South Atlantic	**1,072,088**	**486,985**	**585,103**	**147,943**	**13.8**	**25.3**
Kentucky	257,845	123,819	134,026	15,730	6.1	11.7
Tennessee	250,192	127,179	123,013	26,648	10.7	21.7
Alabama	258,227	171,466	86,761	27,764	10.8	32.0
Mississippi	292,112	216,307	75,805	7,587	2.6	10.0
East South Central	**1,058,376**	**638,771**	**419,605**	**77,729**	**7.3**	**18.5**
Arkansas	240,139	157,894	82,245	9,271	3.9	11.3
Louisiana	162,978	107,744	55,234	8,393	5.1	15.2
Oklahoma	200,951	100,251	100,700	14,615	7.3	14.5
Texas	458,622	203,572	255,050	34,796	7.6	13.6
West South Central	**1,062,690**	**569,461**	**493,229**	**67,075**	**6.3**	**13.6**
Montana	46,150	18,712	27,438	4,847	10.5	17.7
Idaho	41,919	11,140	30,779	21,428	51.1	69.6
Wyoming	16,484	6,189	10,295	2,079	12.6	20.2
Colorado	59,065	18,050	41,015	11,911	20.2	29.0
New Mexico	38,059	17,978	20,081	2,300	6.0	11.5
Arizona	17,681	5,081	12,600	7,082	40.1	56.2
Utah	26,203	4,861	21,342	19,172	73.2	89.8
Nevada	3,365	850	2,515	1,271	37.8	50.5
Mountain	**248,926**	**82,861**	**166,065**	**70,090**	**28.2**	**42.2**
Washington	81,105	15,347	65,758	50,184	61.9	76.3
Oregon	61,137	12,003	49,134	32,578	53.3	66.3
California	132,658	20,241	112,417	120,000	90.5	106.7
Pacific	**274,900**	**47,591**	**227,309**	**202,762**	**73.8**	**89.2**

* 1935 Census—Agriculture. ** 1930 Census—Agriculture.

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EDISON ELECTRIC INSTITUTE BULLETIN

Volume 7 APRIL, 1939 No. 4

Our Sixth Annual Sales Conference

Commercial Forces Optimistic and Undaunted

By C. E. Greenwood

Commercial Director, Edison Electric Institute

ANOTHER Sales Conference of Edison Electric Institute is a matter of record. Again it is the privilege of the writer to introduce a Special Conference Number of our BULLETIN which brings to its readers certain of the presentations of the speakers who helped to make this conclave a success. At this commercial convention utility men, manufacturers, and others concerned in electrical development, held rendezvous at the Edgewater Beach Hotel, Chicago, for a review of what's ahead in promoting the market for electric service.

A round dozen of committees of the Institute held meetings on Monday, March 20, in advance of the four-day Conference sessions. In fact some committees convened on Sunday, March 19. All Conference sessions were open except those on Friday, March 24, which were devoted to the presentations and discussions of POWER problems by and for utility men.

The writer is reminded that it is just a decade since a NATIONAL CONTEST was a feature of commercial activity in utility industry. Substantial prizes were offered to the utility companies making greatest increase in average energy output per home over the year. The 1928 Contest took the slogan ONE MORE KILOWATT HOUR PER DAY. An average increase of 365 kilowatt hours per domestic meter may be considered a star to shoot at for the individual operating company. But such a Contest served as a stimulator of determination to obtain far greater increases in domestic consumption than formerly anticipated, and inspired greater load building effort. A few companies made surprising strides toward that goal although failing to gain it.

If that objective was impossible to attain by an operating company, it was mythical when the slogan was applied nationally for the industry. Yet a new groundwork in thinking was laid by this drive for kilowatt hours. The Electrical Tree has four main branches but it flourishes at maximum strength when its several other off-shoot interests are nourished from common promotional roots. The broader conception of the constitution of the electrical industry, that which brings into focus the numerous other industries with a stake in electrical development, was a happy outcome and established a better base for the initiation of carefully planned and sustained NATIONAL SALES PROGRAMS to replace the earlier

The Registration Desk in charge of Miss Darling and Mr. Holz where 514 delegates recorded attendance

E.E.I. CONVENTION INFORMATION ON PAGE 199

practice of spasmodic campaigns. Greater net increases in output were in the realm of possibility.

We started the new approach none too soon for the utility industry, as the strongest unit in the electrical field, was scheduled for a supreme effort to surmount the greatest political and economic obstacles in its history, not omitting the effects of load mortality. As a result it took the industry about ten years to add ONE MORE KILOWATT HOUR PER HOME PER DAY, the endeavor of individual companies in 1928.

Now reference is made to this particular period because for ten years there has been no industry in which the commercial forces have been more closely knit in objectives, and in organization in obtaining them. The spirit of 1928 was paramount at this Sixth Annual Sales Conference. It is significant because one might consider this the first year of what will be another decade of intensified sales and promotion in the electrical field through the Institute and its member companies.

For years business has been building on the basis of volume and the appliance factories are geared to volume production. When volume fails, profits are affected and this, in turn, affects the funds available for promotional purposes. Therefore the Program of the Sales Conference was geared to "volume business" and how to get it through market studies. It included an insight into our customers' purchasing power; their desires for electrical service; the training of men to sell and serve them; the power of mass effort backed up by forceful advertising and promotion; our competion in domestic, commercial and industrial fields, and how to meet it.

Industry leaders and other authorities discussed these problems and it is a cause for regret that only part of the wealth of information contained in the presentations at all sessions can be included in this issue of the BULLETIN. Over 500 persons (514 the registration records disclose) journeyed to the meetings from all sections of the country to hear the speakers and to take advantage of the immeasurable value to be gained from personal contacts and intimate discussion of common problems. We shall hope that those who remained on the job will avail themselves of the opportunity to review this number of the BULLETIN.

The Chairman of the Conference, Harris E. Dexter, General Sales Manager of Central Hudson Gas and Electric Corp., Poughkeepsie, N. Y., and Chairman of our General Sales Committee, ably presented the theme of the meeting. We had the privilege of hearing the President of the Institute, Mr. Charles W. Kellogg address the opening session on the vital theme of INVESTMENT EFFICIENCY in the electric utility industry, and the obligation of commercial executives to support that goal in commercial operations. And also on the Program as guest speaker at the formal luncheon was Mr. Bernard F. Weadock, Vice-President and Managing Director of the Institute, to bring a note of optimism and point out in his adroit analysis situations which justify this spirit among electrical men.

MR. GREENWOOD

In all, there were thirty-five platform presentations. Following the practice established last year, an entire session was given over to lighting subjects under the sponsorship of the Better Light-Better Sight Bureau. In this session were the lighter touches when Howard Sharp of Buffalo, Paul Manchester of Pawtucket, and Marshall Waterman of Poughkeepsie, presented a cleverly prepared skit on behalf of the Lighting Sales Committee of EEI which dramatized the common denominator of opinion of utility men on the new and much discussed Fluorescent lamp. The session closed with a mysterious commentator before a hidden "mike" to put over some Winchell-style flashes of important achievements of local utility companies from Coast to Coast in promoting Light for Seeing.

A pinch-hitter for an absentee on our program was Dr. Matthew Luckiesh of General Electric Co., a speaker that never fails to interest with his rich store of authoritative knowledge of the lighting art. Since Dr. Luckiesh spoke extemporaneously, we do not have his address to present at this time.

One afternoon session was devoted to electric kitchen equipment sponsored by the now strongly established and vigorous Modern Kitchen Bureau, headed by George E. Whitwell of Philadelphia who presided at this session. The program for the year ahead, now well advanced by the Bureau, was a challenge to the imagination of utility executives for greater business opportunity.

Features of this outstanding commercial week were other meetings that supplement the regular program. At the annual luncheon meeting of the Better Light-Better Sight Bureau, which now starts its sixth year of successful promotion, J. E. North, of The Cleveland Electric Illuminating Company, was elected national Chairman to succeed C. A. Eastman who moved into the operating field. The Commercial Electric Cooking Council held a dinner meeting at which its further activities for 1939 were outlined. Likewise the General Sales Committee of the Institute dined and deliberated on the evening of the twentieth, and a review of activities and discussion of questions of moment carried the meeting until well on to midnight. It was pleasing to have a delegation of advertising executives of utility companies present which was an innovation this year. A luncheon meeting of this group was a feature of the events of the week.

The final day of the Conference—POWER DAY—was closed as usual to all but utility representatives because of the confidential discussions which are encouraged at these sessions. Two of the presentations appear in this issue and it is expected that some others may follow in later issues of the BULLETIN.

No brief review of what happened in Chicago during the Conference would be complete without a word of appreciation to our manufacturer friends who helped so effectively to make the relaxation hours both sociable and refreshing.

"On to Chicago" was the watchword, and we are encouraged to believe that the opportunity given those in attendance at the Sixth Annual Sales Conference to earn a dividend on their investment in time and money will justify a return for the "Lucky Seventh" next year.

Progress in Commercialism

By H. E. Dexter

Central Hudson Gas and Electric Corporation, Poughkeepsie, N. Y.

An address before the Sixth Annual Sales Conference, Edison Electric Institute, Chicago, March 21-24

IN OPENING this program I want to make just a few general remarks about our business that have come to my attention during the past year or so, and which I think merit the consideration of the commercial people in our industry.

Our industry, since its inception, has had a remarkable growth. In spite of the numerous difficulties that it has faced, it has come through the trying years with flying colors. It is something we are all proud of, and proud of whatever part we may have played in it. The question now is—where do we go from here?

Well, the fact is that in spite of our excellent sales work for the past decade and a half, we still find that right now—today—from 50 per cent to 60 per cent of our customers nationally are being sold kilowatt hours at less than their full cost, thus being what are sometimes called unprofitable customers. It is also a fact that at least 50 per cent to 60 per cent of our customers throughout the country feel that they cannot afford to cook and heat water electrically.

In spite of any feeling of success that our industry may have in regard to its overall accomplishments, this record does not speak any too well for us as commercial people, or for our companies, in extending the benefits of complete electric service to our customers, to say nothing of the effect on our income statements of this large percentage of unprofitable customers. Our small customers are continually hearing about all the benefits that go with complete electric service, and still they cannot afford them. Is it any wonder they feel that they are being deprived of something they really ought to have to make their homes more livable, only because the utility keeps the price beyond their reach?

A customer in this state of mind will not distinguish between whether the reason for this is that the rate for electricity is too high, or the equipment which makes it possible for him to use our service is too expensive. It just happens

MR. DEXTER

that in almost every case it is the cost of the equipment and not the cost of operation that prevents him from enjoying the use of these services.

Just what is the answer to this problem? It seems to me that the answer is more planning—more head work, less foot work—more scientific thinking, and less guess work in laying out our sales programs. If we are to sell sucessfully today, we must remove the guess work. Sound sales planning requires just as much scientific study today as one would use in a chemical research laboratory or in designing a steam turbine. This planning must start before the inception of the appliance or equipment. There are altogether too many electrical devices sold to our customers today to make use of our service, that are originated in the mind of a man who is almost entirely isolated from the actual customer who is to use them. This individual makes the best guess he can of the market requirements, and as a result, if these devices fit the market at all, it is usually only a small fraction of the market and the section of the market in which the designer lives himself. If it is a device for use in the home, the engineer is inclined to design a piece of equipment that would fit his own home and his own mode of living, which, in reality, if the engineer earns $4,000 or over, represents just a little slice off the top of our market for electricity—a slice so thin that it denotes only ten out of each hundred of our customers. If the particular appliance happens to be a range or a refrigerator, where the saturation is now greater than 10 per cent, the product of our designer would probably be suitable only for the replacement market and not at all for the market in which our low income customers fall.

The first step in getting the guess work out of selling is to really know our customer's business, whether it be a store, a home, or a manufacturing plant—know from first-hand information just what electricity can do for him. Don't think necessarily in terms of appliances and gadgets that may be on the market, but in the more fundamental services that electricity can render, such as heat, light and power.

When the customer's basic needs are known, the problem then becomes one of harnessing electricity to the job. In this operation we must not overlook the fact that the equipment manufacturer's interests and our own may not be the same, and also that the interests of the large manufacturer may not be the same as those of the small one. The equipment manufacturer is in business to make money for himself from the sale of equipment or appliances, and perhaps he can make more from the sale of high priced equipment to a certain limited market, whereas our interests must include every customer who is connected to our lines, and our principal business is selling energy and not equipment.

In putting electricity to work for the customer, the fact must not be overlooked that electricity has a great many inherent advantages as a source of energy that make it unique if properly applied. For example, it is the only practical source of heat today that does not require a flue. Water can be heated at its point of use, eliminating practically

all of the hot water piping in the home, thereby saving not only investment but maintenance costs and the possibility of leaks, a considerable saving in heat loss, and a saving in the amount of electricity required for a given job. This fact is apparently of no interest to the average water heater manufacturer and can easily be understood—he is in business to make a profit out of the manufacture and sale of water heaters, and if he can get us to quote a low enough rate for electricity, it is unimportant to him whether the water heater is located at the point of use or 100 feet away. However, we hope that as our utility problem is better understood more manufacturers will cooperate in its solution.

If we are to continue to be successful in the sale of electricity, we must get the guess work out of our planning. One of the best examples of what can be accomplished by good planning can be found right in our own industry. Take the case of the I.E.S. lamp and the Better Light-Better Sight program. Here we have a lamp well designed to give good light; a lamp well made, good merchandise in the customer's eye; sold at a fair price, and what have you: 7,200,000 I.E.S. type lamps sold in five years; over 1,800,000 sold in 1938.

Another example, which speaks for itself, is the cooking field. In this case too many of our friends are apparently entirely content with our present cooking equipment, adding a gadget here and a gadget there, or making changes in the general overall shape of the equipment, with an eye for appearance and not always for convenience. It is a fact, however, that the range in general is the same style as the range used by our grandmothers, the only difference being that in place of wood a coil of wire has been substituted, and the color changed to white instead of black. No thought has been given to how electricity can be taken into the home and used to cook for our customer, taking full advantage of all the possibilities that electricity might offer this customer in lower priced equipment, more convenient equipment, equipment requiring less space, all of which might be possible if the designer knew the market, knew the problems of our customers, and had a better perspective of the overall domestic picture. Many times I have had a woman customer say to me—"Some man must have designed that range—no woman would ever think of a contraption like that."

What has happened to the pioneering genius that our American industry is supposed to have? Has it all gone into building aeroplanes, or is it following the Rip Van Winkle tradition and taking a twenty-year sleep?

Think of the results that might be derived if the same sort of planning was applied to electric cooking or water heating that was applied to the I.E.S. lamp! Some idea may be gained from comparing the growth of roaster sales with those of the electric range. The first electric range was sold about 1910. In the year 1919—nine years later—21,739 were sold. Twenty-five years later—in the year 1935—215,000 were sold. These figures rose to 405,000 in 1937, dropping to 250,000 in 1938.

On the other hand, the electric roaster reached 50,000 the first year, and 225,000 in the year 1936, the third year of its sale. In other words, the electric roaster, at the end of three years, had as large an annual sale as the electric range at the end of twenty-five years. It is also interesting to note that while electric ranges dropped 38 per cent in sales in 1938 from the high of 405,000 in 1937, roasters only dropped 10 per cent from the high in 1937 of 250,000.

This is an indication that our customers are interested in electric cooking and that they can be sold electric cooking if we find the proper solution to their cooking problems. The principal difficulty is that the industry has been thinking too long in terms of the traditional range. That isn't the answer. It requires something new—some device that will adapt electricity to the housewife's needs as she sees them, and not as we or the manufacturer sees them.

I would like to urge that we all take upon ourselves, both individually and collectively, the task of getting equipment manufactured that will more satisfactorily adapt electricity to our customer's needs. There is no agency to which this job can be delegated if we are to fulfill our full duty to our customers and to our companies. There is no one as well qualified to get this information as we are.

With this sort of data at hand, it should be possible to duplicate the results of the Better Light-Better Sight activity in many other fields to the benefit of both ourselves and the equipment manufacturers.

After the equipment we must not overlook the financial side. Most of our low income customers work by the hour, get paid by the hour and bring home their accumulated earnings weekly. Part of our problem is to regularly transform part of this money into permanent appliances.

The low income customer may find it difficult to save 75 cents per week out of each weekly envelope to make $3.00 per month, the equivalent of 10 cents per day. Experience has also shown that other claims make it hard for her to even hold 75 cents per week until the collector gets there. The pressure on the consumer is great. On the other hand, if we use a meter and collect the two nickels each day, we have the money and remove the temptation.

For example—42 per cent of the refrigerator sales with my company in 1938 were meter sales. It opened an entirely new market, made possible electric refrigeration in homes where the housewife never really expected to have it.

Our total sales of domestic refrigerators in 1938 were approximately equal to that of 1937—7 per cent of our customers.

Meter selling requires a new concept of credit. These low income customers can only pay when they have employment. These people do not have any credit as we usually think of it.

We must pass credit upon our best knowledge of employment conditions and establish our reserves accordingly. The meter is only a savings device to assist an honest workman to transfer small coins which might normally be wasted into a useful appliance. It is not a means of collecting from a dead beat who hasn't any money.

In 1937, 130,000,000 people dropped pennies into automatic scales to see how much they weighed.

My company collects approximately 180,000 nickels every month through meter devices.

Out of 576 units sold on the meter plan in 1937, 84 or 14.6 per cent were taken out. The reasons are as follows:

Number Removed	*Per Cent*	*Reasons for Removal*
37	44.1	Out of Work
11	13.1	Left Territory
7	8.3	Death or Divorce
	65.5	
16	19.0	Wouldn't or Couldn't Pay
10	11.9	Slow Pay
3	3.6	Changed to Other Plan
	100.0	

Our success depends upon our knowledge of our customers and how well we serve them.

Utility Sales Department Responsibility for Investment Efficiency

By C. W. Kellogg
Chairman, Engineers Public Service Co., Inc., New York
President, Edison Electric Institute

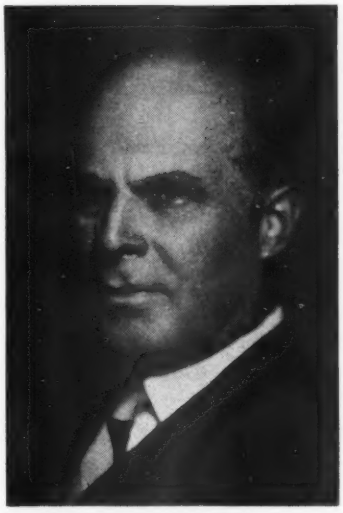
An address before the Sixth Annual Sales Conference, Edison Electric Institute, Chicago, March 21-24

AMONG the Fifth Reader stories of my school days, one that has stuck in my mind ever since, was about the farmer who, upon his death, left a note for his sons telling them that there was a pot of gold buried in the orchard. No sooner had the old gentleman been decently buried than the dirt began to fly in the orchard. For weeks and months the search continued feverishly, not a foot of the orchard but was thoroughly and deeply explored. The pot of gold as such was not found and the disappointment of the sons knew no bounds. Later it developed, however, that the digging had so improved the yield of the orchard that it did even more for the boys than a pot of gold would have done—it produced a greatly enhanced income for many years.

I believe there is a moral in this old tale for us in the utility business. For many years we have perhaps thought too much about the pot of gold and not so much about developing the orchard. Have we not perhaps concentrated so fully on the kilowatts sold that we have not reckoned as much as we should have on how and where the kilowatts were to be used? Still following the metaphor of the story, I feel that our furious efforts have produced a tremendous expansion of transmission and distribution lines which were all to the good but that our problem from now on should be partly at least that of cultivating the orchard which these lines represent.

In making this observation I realize I am stating no new proposition but one for which your chairman has been contending for some time.

This problem appeared most strikingly in the last few years in the case of rural electrification. Under the pressure from government sources lines were extended into territory so thin that a fair return



MR. KELLOGG

on the investment, at least in the early stages of development, was impossible. When our Committee on Rural Electrification met last year it found that there appeared to be little that could be done to make the construction cost of rural lines any less (it had already been crowded down to the lowest point consistent with dependable service), little that could be done to extend lines much into rural areas. This latter had already proceeded beyond the point of being profitable. The big problem of rural electrification, as reported by men in our industry from all parts of the country, was a sales problem of cultivating the orchard. This sales problem in the rural areas involves not only trying to extend the utilization of well-established electrical devices for the use of electricity in the home, but also demonstrating to farmers how they can employ electricity to their economic advantage in farm operations.

Another example in our history as an industry of pot-of-gold versus the cultivation of the orchard is found in the industrial power field. A decade or more ago, when the most strenuous efforts were being made to electrify all industry and get it connected to our lines, enthusiasm plus competition caused many a large power contract to be taken on at rates which were not profitable. Subsequent experience showed the great kilowatt-hour sale to have been taken on in some cases at rates which were not compensatory. As such contracts expired in the intervening years, they have in many cases been dropped to the distinct improvement of the true economic picture of the utilities.

At the present time and for a year or so past we have been perceiving the possibilities for improvement of the electric business in the commercial field. Until quite recently the feeling was common that the use of electricity by commercial customers was relatively necessitous, was limited in amount by such necessity and that there was little that intensive sales effort could do to improve the situation. This viewpoint was buttressed by the apparently greater possibilities for load development in the residential field. It was further supported by the emphasis placed by government competition on the residence customer on account of his vastly outnumbering all other classes of users.

I do not belittle the wonderful strides that the use of residence electricity has made in the last decade. I will go further and say that I believe the next decade will show even greater gains in energy consumption in the homes of the nation than did the decade now ending. What I do point out is that by proper cultivation and rate structures the same sort of intensive development should be possible in the commercial part of our

orchard as has been accomplished in the last ten years in the residence area. Results already obtained in cultivating the commercial customers show them susceptible of a response to much the same stimuli as have proved effectual with the home owner.

In these two fields of more intensive cultivation, rural and commercial, the industry's exhibits at the World's Fair this year should be both instructive and stimulating. For the first of these a separate model farm exhibit has been prepared which will demonstrate the large number of uses of electricity than can be effectively applied to farm operations. With respect to commercial uses of electricity, the very theme of the Institute's main exhibit is the contrast between the street of yesterday and that of tomorrow. In each case the orchard is in being; what is needed is the same sort of intensive cultivation as though a pot of gold were to be dug up, and the result should be improved permanent earnings worth much more than a mere temporary windfall.

There are excellent reasons for the policy I have suggested of a more intensive development of our existing facilities. As was pointed out at our last general sales meeting, the public service business is a service but it is also a business. If it does not succeed as a business it does not succeed at all. Long experience from the earliest days shows that we need about six dollars of plant investment for each dollar of gross earnings we take on. This six dollars can be obtained from the investor only if he believes he will get a fair return on his investment. While the maintenance of satisfactory net earnings is not the responsibility solely of the salesman, on the other hand the situation is serious enough so that his efforts should at all times be directed toward the effect they will have upon the company's final balance.

The problems we face in upholding what Kinsey Robinson has referred to as "that essential figure in the southeast corner of our earnings statements" are much the same as with other lines of business. The high spots, so far as we are concerned, are somewhat as follows. (I have told this story so often that I fear it may seem boresome but it helps to get the facts.) The dollar the utility earns goes out about five-eighths in fixed charges, consisting of taxes, depreciation and return on investment. The other three-eighths go for operating expenses, that is making, selling and distributing the product and maintaining the property. I might add parenthetically that more than one-half of the operating expenses (55 per cent to be exact) consists of payroll.

The largest sector of all in the utility industry's dollar is return on investme· which for 1938 was 33 per cent of the total dollar but represented a return of only about 5¼ per cent on the $13,000,000,000 invested in the industry. This is perilously close to the point of not being interesting to investors, and, being an average figure, means that the less prosperous companies were definitely below the stage of showing an attractive rate of return.

The difficulty is that this balance for return, this southeastern corner figure, is what is left over after all the other prior demands have been met. Here is the way that in recent years the burden of some of these other prior demands on our dollar have grown. In the last ten years (and that is comparing with boom times) the weekly cost of labor per employee has gone up 13 per cent; taxes, in per cent of gross, have increased 70 per cent and depreciation charges (similarly expressed) have grown nearly 18 per cent. With these increases in items beyond our control we can keep our net figure satisfactory only by the most strenuous efforts with the items we can control, like greater efficiency in manufacture, transmission and distribution and like the greater use of our existing investment—which is the burden of my paper.

Because I lack the expert knowledge to do so, I will not attempt to be more specific as to the ways and means of accomplishing our sales goal. That is your job and you are experts therein. The very purpose of this meeting is to get together to discuss how the great objective in sales shall be attained; and the large attendance and the interest and scope of your program show that the brains and ingenuity of our great industry are being effectively mobilized for sales effort. I do want to point out the presence of the rocks which, like good navigators, we must keep off of as we pilot our boat on its course.

When I think of more intensive cultivation of our orchard I am reminded of the old saying, "What man has done man can do, and what has never been may be." The shining marks of sales achievement made here and there throughout our industry are a constant challenge to the average performer to do himself those greater things which others have actually accomplished; and the restless effort which produced the high points is a constant spur to raise the sights ever higher. It is in this way that each of us can be an inspiration to another and illustrates strikingly the value of the cooperative effort which the Institute both fosters and makes possible.

The value of a gathering like this one is twofold: (1) to gain the breadth of view and freshness of outlook which come from leaving home and mixing with your colleagues who are engaged in more or less similar effort; and (2) to acquire new tools and learn new methods from the papers and discussions here presented. The companies that employ us are spending in the aggregate a vast sum to transport us here and back and to maintain us while we are away. Let us see to it that this investment by our companies is appreciated by us and that they get full value for the effort and expense.

Speaking for the Institute, Mr. Chairman, I want to express to you the thanks and appreciation of the electric utility industry for the thorough and devoted work you and your associates on the General Sales Committee are so unselfishly performing for the improvement and diffusion of the great human service to which we are all dedicated.

Our Job May Not Be Yours

(*Continued from page* 165)

a low cost but that the company will cooperate to make available to them high-grade electrical appliances at low costs. It has developed an army of enthusiastic cooperating dealers and has brought home to our employees the realization that our business prospers as customers own and use electrical appliances. The results are ample proof that the campaign put appliances in the hands of our customers. It gave over 230,000 customers electrical comforts, comforts through the use of electrical appliances, which they never had before. It gave the 685 cooperating dealers greater profits and put them in a better financial position with the distributors and manufacturers than they ever enjoyed before—as the records of the distributors and manufacturers prove—and we are well pleased with the operation—but continue to conclude that what applies to New York may not apply to other territories and what is "Our Job May Not Be Yours."

Selling Better Methods of Selling

By Max C. Fisher

Assistant Secretary, Metropolitan Life Insurance Company, New York, N. Y.

An address before the Sixth Annual Sales Conference, Edison Electric Institute, Chicago, March 21-24

A LIFE insurance program, for an individual or a family, must be built carefully and precisely to specifications based on needs, it must be carefully and competently installed, it must be periodically serviced, and it must be altered from time to time as the circumstances of the individual and family change with the passage of years —or else the insurance will fail to render the full service for which it is designed.

Until I had been able to visualize the parallel between the installation of a life insurance program and the installation of something electrical, I was a little at a loss as to how best I might respond to Mr. Greenwood's kind invitation to speak to you today. I don't intend, however, to attempt to follow the parallel too closely—or too far. My electrical knowledge has its limitations. I do wish to thank Mr. Greenwood for giving me the opportunity to appear before a group of men who are doing such an excellent job of making available to greater numbers of people so many of the great and small conveniences of electricity. It's a grand work, and I hope you all prosper in it.

The Field Training Division of the Metropolitan Life Insurance Company was organized seven years ago, and since that time it has amply justified the vision of those who saw the need for an organized training program for our sales representatives. At the present time the Field Training Division consists, essentially, of 8 Home Office supervisors—one to each of our policyholder territories—25 field supervisors, and 99 field training instructors who work with the field men in the district offices. The entire unit is headed by Mr. C. J. North, Third Vice President. An important part of Mr. North's responsibility is to maintain close relations between the Field Training Division and the management of the agency forces, thus assuring effective coordination of the two interrelated functions of management and training. Later on I will show how essential this relationship is to our work.

MR. FISHER

Last year, with this training staff of 132 men, direct individual training in sales methods was given to 1556 agents and 1362 assistant managers—a total of almost 3000 men. At the same time, approximately 3000 men were enrolled in the various educational courses given either by correspondence or by classroom instruction. Thus, with about 100 instructors and a supervisory force of some 37 men, the Field Training Division is able in one year to exert a direct favorable influence upon close to 6000 field men who carry our message to the public.

Now that I have given what might be called a sort of thumb-nail sketch of the Field Training Division, the extent of its work, and its relation to the management of the agency force, I should like to continue with a more extensive review of the *why, who, what,* and *how* of our training work. I shall also indicate some of the results that have come to the field man and to the company from our operations. I will omit any discussion of our classroom and correspondence courses and confine myself to a consideration of direct personal training of our representatives in the field.

In the life insurance business, proper training of our representatives, or agents, is a matter of utmost importance. This is in rather dramatic contrast to some other types of business. William Wrigley is quoted as having said: "Our product is sold to consumers by advertising. That's where our selling is done and how our demand is created. True, we have a hundred or more men who visit the retailers through whom our product is distributed. For lack of a better name, they are still called salesmen—but they know that the whole job of selling has already been done for them, at the consumer end of the line, by the printed page. In reality they are traveling service executives who see that the relations between this company through the jobbers to them are properly maintained." In other words, the consumer's mental attitude toward the product and the company is influenced for good or evil by advertising skill. The public has no direct contact with the personnel of the producing company.

How different is the problem of selling life insurance! Insurance companies advertise, to be sure, but the advertising program of itself is probably not instrumental in placing a great deal of life insurance. Our advertising is designed to be a help to the underwriter in doing his job of selling and servicing.

Proof of the importance of personal solicitation in placing life insurance may be seen from the history of those efforts which have been made to offer life insurance to the public at low cost on an over-the-counter basis, and also from the record of one life insurance company that attempted to do its business by mail. The results were in each case unsatisfactory from the standpoint of volume of new business. If further proof of the importance of the agency system of the American life insurance companies were needed, it is necessary

only to compare our own record with that of any foreign country. Life insurance must be sold by the direct personal solicitation of an underwriter.

The attitude of the public toward the Metropolitan Life Insurance Company, then, is formed by a man—a man who is alone with the prospect and policyholder, a man who is not under direct supervision during much of his working time. The policyholder judges the Metropolitan and even the institution of life insurance by the methods of this one man. For the time being, as far as *one* prospect is concerned, this man *is* the Metropolitan. This agent's conduct, therefore, is vitally important to the company.

The Metropolitan Life Insurance Company has over twenty-one thousand agents, twenty-five hundred assistant managers, and about eight hundred managers throughout the United States and Canada—a total of over twenty-four thousand men who come into direct personal contact with prospects and policyholders. An average week's work for one of our agents involves about 230 personal calls to talk with someone about life insurance. The preponderance of these visits are service calls, while the remainder involve prospecting and selling; and, of course, all three activities may take place during one interview. But the point I wish to make is that, whether selling or servicing, during an average week the Metropolitan agency force has talked of life insurance to about 4½ million people.

During the full year we estimate that we have had direct personal contact, through our representatives, with well over ten million people—a number nearly equal to a tenth of the total population of this country. Mark you, in one year we have come into personal contact with nearly a tenth of the population. Consider also the fact that our representatives are the basis for the quality of our service and the medium through which our insurance meets fully or only partially the needs of the policyholder. Add to this the fact that life insurance touches the most vital part of the life of the individual and his family. The result forms the foundation of our profound feeling of responsibility for the proper training of each and every one of our representatives.

That is the *why* of our giving so much thought to the development of proper training methods.

How have we done our job? We have done it simply by selling. We are not so much trainers or educators as we are salesmen. We do constantly visualize our training work in terms of selling better methods of selling.

Putting over better methods of doing business by managerial pressure, by force if you please, is no part of our thinking. Why should it be? When we develop a new and better method of selling or servicing, we know it to be a better method for the policyholder, for the company, *and* for the representative himself. If we can convincingly demonstrate to the agent that a new method is better *for him*, where is there any possible excuse for weakening our presentation by pressure methods?

But I'm getting a little ahead of myself.

Please keep in mind, if you will, that any method of our work which I describe during the next few minutes is nothing more than a description of how we in the Field Training Division *sell better methods of doing business to our field representatives.* For emphasis, let me repeat, *our training is selling.*

It is our conviction that all selling should start with needs. Any product, new or old, should be created only to do its part in filling some human need.

In the life insurance business we have long been alert to the needs of the policyholder. His protection must be carefully planned and revised from time to time to fit his economic responsibilities toward himself and his family. It is also important that the policyholder have some true understanding of what is contained in his life insurance policy, so that at no time will he discover he does not have the protection he thought he had. It is the responsibility of the agent to determine the needs of the policyholder and to do his utmost with tact, intelligence, and knowledge, to meet those needs with life insurance protection.

The specific problem of the Field Training Division which I wish to consider now is that of determining the needs of our agents, assistant managers, and managers. The work of the agency force is observed through close managerial supervision of the Agency Divisions of our company. Furthermore, the instructors and supervisors of the Field Training Division are also in daily contact with the agent and are in a key position to make continuous observation of the agency force in action. But observation, no matter how intelligent, is not enough. Managers, assistant managers, and agents have all been encouraged to bring their problems to us voluntarily. That sounds easy, but a great deal of care and tact is required to build up and maintain the complete confidence between Home Office and the District Office which makes possible a free and open discussion of problems intimate to the field men themselves. Men don't always feel free to frankly and openly discuss their failings with their superiors in a business organization.

If we desire special information concerning the problems of our field men we organize a hunt for facts—a survey. Some time ago trained observers from the Home Office spent a total of 112 days with 195 different agents in 32 districts of five separate territories—to obtain organized information concerning the production methods and work habits of our field men. The observers brought back word-by-word reports of over 4000 calls, a number about equal to those that would be made by an average or composite agent during a six-month period.

An analysis of these calls demonstrated clearly to us that our representatives needed some practical program of time control, definite prospecting methods, and organized sales talks.

This doesn't mean, necessarily, that *all* our field men need *all* these things. Some of our men are bound to be ahead of us in certain respects. Developing something to fill the needs observed in the field does not mean, with us, sitting behind a desk and thinking up something—not entirely. We have made definite and concrete efforts to seek out the man in the field who is doing a particularly good job in some phase of his work. First, we let him know that we are pleased. We ask him to demonstrate his method to us. On occasion we invite him in to the Home Office to demonstrate and describe his method and the results he obtains from using it. This attitude on our part has been a great builder of morale in our field force.

Then, after we have discovered what appears to be a better method of doing a part of the field man's job, we take the method into our laboratory for analysis and improvement. To this end we sometime ago established within our Field Training Division a Methods Unit—our laboratory. We have here several carefully selected men who de-

vote their full time to the development and field testing of better methods of prospecting, selling, and supervision. They are charged with the responsibility of analyzing new methods and new tools, studying them, and suggesting improvements to make them fit the needs of the largest possible number of our field representatives.

Once a new method or a new tool has been refined to the point where we are convinced that it is good, we send it—like a new-model automobile—to the proving ground. The men of the Methods Unit try it out themselves in the field, to see if it works for them. After this test, we select a few managers, assistant managers, and agents in different localities who are able to give the new method a really thoroughgoing trial in their own communities among their own prospects and policyholders. The results of such testing are carefully weighed; and on the basis of our findings during the field test, the plan is again studied and revised. Then, possibly only after further revision, the method is ready for distribution to the field force through the medium of the field training instructors.

Now: up to this point we have defined the need, we have discovered and developed a better method to meet that need, tested it, and made it ready for distribution.

At this point, it is up to us and the field training instructors to sell the new method to our field force on its own merits.

In detail, our practice works out like this: The Home Office Supervisors demonstrate the new method to the Field Training Supervisors either singly or together in meetings. The Field Training Supervisors, after becoming proficient themselves, demonstrate the method to the instructors, either individually or in a meeting called for the purpose. After the new method has been disseminated to the members of the Field Training Division, the next step is to sell it to our representatives in the field, the Managers, assistant managers and agents of the district offices.

Here I must digress a moment to clear up a question before it is asked. The *who* of our sales training program is not the members of the Field Training Division alone. The *who* of our training program consists of Field Training men, plus the managers and assistant managers of the district offices. Training and supervision are so closely interwoven that the greatest economy and best results are obtained by enlisting the front line of management as the front line of training, making the two functions a part of the same man's work. The assistant managers in the district offices form this front line. The theory behind that idea —theory and fact—is this: One cannot train a man to use a method properly and be secure in the knowledge that from this day forward his use of the method will be faultless. Man and his methods are continuously changing, and we must make use of this universal human characteristic. Training is a continuous process, a man must be trained and retrained.

The assistant manager in the district office of the Metropolitan is in constant and daily contact with the agent. If anyone is in a position to encourage steady improvement in the methods of the agent it is, therefore, the assistant manager. Furthermore, in most district offices it is the assistant manager who has most recently been an agent himself, and he has a thorough understanding of the agent's problems and needs. He is the man who can most effectively help the agent to better himself in our organization.

Our training assignments, then, are conducted with the assistant manager as our primary objective. When we train an agent, it is as a demonstration to the assistant manager on how to do a similar training job himself. It is our ultimate objective that all assistant managers become capable trainers of men. Training is an important part—perhaps the most important part—of their job of supervision.

In selling the field man a better method of doing his job, the following steps are required: First, demonstration by the trainer. The trainer, accompanied by the assistant manager and the agent, makes a sale to a prospect, using the improved method of presentation. After a great deal of experimenting, we tend to think of all training assignments in terms of three-week periods. During the first few days the trainer meets the prospect and makes the sales observed by the assistant manager and the agent. This continues until the value of the new method is convincingly demonstrated by results in the field man's own territory—by increased sales or because of the time saved. Soon the agent wants to try the method himself, whereupon the assistant manager and the instructor become the observers. Between calls and at the end of the day, the work is discussed and analyzed. Eventually the agent becomes enthusiastic about the new method, its use has become a habit with him, and he is literally bursting with renewed confidence, and insists on making all the presentations himself. Then we know that we have sold him a better method of doing his job.

The instructor's responsibility is, however, primarily to the assistant manager. The assistant manager should be able, at the end of three weeks, to give further help to this one agent and do the same for the other agents under his supervision.

Now you wish to know something of results. The accurate measurement of our results, considering both quantity of business and quality of business, presents a difficult problem. In the life insurance business the man who is the largest producer is not always the best salesman. You may say that this is true in any business—but it is particularly so in life insurance. So our measurement of results must always keep in mind the two factors of production — quantity *and* quality. I shall not go into detail here because I feel that the elements which go into what we call quality of business would not be of sufficient interest to merit careful discussion. But keep in mind the fact that we have carefully developed yardsticks which measure very well the quality of business resulting from our training work. Otherwise any statement I might make as to results would be meaningless.

When word comes to us from the agency division that a certain agent needs help in prospecting, for example, we first get out his record and make a careful analysis of his work for a period of at least six months prior to the training assignment. A record is kept of production during the assignment, and for six months afterward. On the basis of these records we determine whether or not further training is needed. In some instances we have followed the work of one man for a much longer period of time, as a sort of check on ourselves. We also keep parallel records by which we know whether the assistant manager is developing into a good trainer of agents. As a result of our training we can show improvement in the quantity, quality, and persistency of business sold, and an increase in the average size of the policies written. There is also a demonstrable and appreciable improvement in the agent's performance in conserving

and reinstating business, as a by-product of his improved sales technique. Furthermore we can show a gradual improvement in the performance of agents who have been trained by us in the ratio of sales to interviews.

These are what might be called primary results—and they in themselves seem to justify the program we are following.

All of us these days are looking toward the public to determine its reaction to us and our institutions. Life insurance is not an exception. I wish I could point to charts, tables, and percentages to show you just how much public understanding of life insurance has improved as a result of our training. To do so would be impossible, obviously.

We reason somewhat as follows, however, and, I believe, properly so. The policyholders who keep their policies in force until they mature, either as endowments or as claims, are enthusiastic centers of good-will toward the Metropolitan and toward life insurance generally. It is hard to imagine a policyholder who has received the face value of an endowment policy, or who is receiving a retirement income from his life insurance holdings, who is not enthusiastic about life insurance and the company that makes it possible for him to have it. Nor can one imagine the wife and children of a departed policyholder who are not boosters for life insurance, almost to the point of religious fervor. I may sound a little boastful, but life insurance is something which, if sold properly and maintained in force, creates good-will unfailingly. So we measure the good-will of the public partly by the persistency of business. We also count it as an evidence of increased good-will if the agent is more capable of explaining accurately and understandably to the policyholder just what it is he is putting his money into. We have been able to cut down the ratio of misunderstanding on the part of policyholders.

I feel now that I can have given you a fair picture of the mechanics of our work, the discovery of a need on the part of the field men, the analysis of that need, the finding of a new method of work or a new tool to meet that need, the testing and refining of the new method, and finally, selling that new method to the men who are to use it. In selling it to them we demonstrate its effectiveness in solving their own problems on their own job. We help them to learn to use it, and we stand ready to help them further should they need additional training. During the same assignment we have trained an assistant manager so that he can continue the training program with his other agents. Throughout, we conceive of our job as one of selling—selling improved methods and tools for selling life insurance.

Our most difficult problems, however, have not come as a result of trouble in working out this "production line," as you might call it. As in any sales organization, our most difficult problems have been those involving human relationships.

From our experience in the Field Training Division, we have set up four guiding principles which apply equally to the supervision of instructors and agents. To give meaning and content to what I have already said, I must discuss them, at least briefly.

First: The men with whom we are dealing must be led and not driven. Because of the nature of the work of the instructor and the agent, they must learn to supervise themselves. This means that the individual must clearly understand his duties and the best way of performing them. By our every act, by our every contact with the instructor and the field man, we must convince him that our sole purpose is to help him do a better job. As a result of this attitude on our part, the field instructor thinks of his supervisor not as a boss but as a helper, and the relationship between them is a hearty and sincere one. The assistant manager and the agent in the field likewise turn to us readily and with confidence. They know that when we study their records and work with them, it is with the sole purpose of showing them a way in which they can better their job and themselves.

This leads directly into and is a part of our next guiding principle. Supervision consists of helping men to grow. Our system of development of new ideas, our records, and our philosophy are all closely tied to this principle; and our men are aware of it. Their loyalty and their progress in our organization bear witness to this fact.

The third principle: To supervise effectively, we must improve the job as well as the man. Someone has said that effective management consists of getting better than average results from average men. One might qualify that or add to it a bit, but it is a valuable guiding principle. To do so requires improvement of the circumstances under which men work. To improve the job is one of our basic functions. For that purpose we have the Methods Unit which I have described, in which we develop better methods of doing the agent's work.

To better our supervision we must develop yardsticks to measure improvement in work. This applies both to the field instructor and to the agent. I have already described the difficulty in making accurate measurements of the quality and quantity of an agent's production. But to do so is essential if we are to continue to improve our training. It is only by watching our results that we can determine the direction we will follow in the future.

In the Field Training Division of the Metropolitan Life Insurance Company we feel strongly that a new method of selling, like an electric generator or a life insurance program, must be built accurately and carefully to specifications based on needs; it must be painstakingly installed so that it will function smoothly and surely; it must be serviced so that its performance will be maintained, and from time to time it must be altered to fit new and changing needs. These are the steps of making a sale and establishing and maintaining good-will. So in our work, we stick close to the thought that we are after all doing only one thing—we are selling better methods of selling. That, in its essence, should be the underlying philosophy of any program of organized training in business.

Better Light-Better Sight —Better Schools

(*Continued from page* 147)

Although I am no longer in Van Wert, I am just as enthusiastic about the beneficial results of their lighting program as I ever was. In fact, since going to Fremont, we have revamped the lighting of our Sight Saving Class, bringing it up to 40 foot-candles. We are at the present time equipping our administration building with completely indirect lighting. The church to which I belong is doing the same. My own home has made some changes in fixtures. I am still light conscious and willing to do all I can to spread the gospel of Better Light-Better Sight.

If it were not too presumptuous on my part, I should like to suggest a slogan of Better Light for All and All for Better Light. It is only through cooperation of all agencies that this invaluable commodity can become a lamp unto our feet and light to our pathways.

Some Problems and Opportunities in Rural Electrification

By Grover C. Neff

President, Wisconsin Power and Light Co., Madison, Wis.

An address before the Sixth Annual Sales Conference, Edison Electric Institute, Chicago, March 21-24

RURAL electrification is growing up. We can properly say that this development was born on December 31, 1923, for on that date less than 3 per cent of the farmers of the United States had electric service. Its first seven years of childhood showed a very steady growth and on December 31, 1930, service had been made available to approximately 1,000,000 farms. The next few years from 1931 to 1934 inclusive were very trying ones for this youngster but after 1934 it again grew rapidly and on Dec. 31, 1938, electric service had been made available to approximately one and one-half million farms. To date this fifteen-year-old development has cost approximately $700,000,000, about 80 per cent of which was spent by the utility companies of this country. Those of us who are charged with the responsibility of guiding this strapping big youngster to a healthy, self-supporting maturity appreciate that we have a real job on our hands.

MR. NEFF

Cost of Farm Electric Lines

Many of the problems that confronted the industry when this development started have been more or less satisfactorily solved. The cost of the farm lines has been repeatedly reduced through changes in design of the line and equipment. It is, of course, important to do everything we can to further lower the cost of construction wherever it is feasible to do so, but we must be careful not to make the construction standard so low that high maintenance and operating costs will more than offset the saving in fixed charges.

The lines must be so built and equipped that the number of equipment failures on the line, such as transformer failures, fuse burnouts, etc., are held within reason, as high transportation costs are usually incurred when repairing and replacing damaged equipment located on farm electric lines. These problems have been given a lot of attention in the past with very good results and are still being studied.

We all wish to build the lowest cost line that will satisfactorily serve the farmers, and the point I wish to make here is that in our eagerness to do this we must not overlook the increased operating and maintenance costs which may result.

Farm Line Extension Plan

The question of the extension policy has received a lot of attention in the past and has been pretty well solved by most utility companies. In general, utility companies are financing the cost of the farm electric lines, under average conditions. This is as it should be, for the farmer in most cases needs all of his finances to electrify his farm. To the extent that we ask him to finance the building of the lines, we delay the full electrification of his farm. The value of our farm lines depends largely upon the use the farmers make of them. Therefore, our extension policies should not contain a feature that hinders the acceptance and use of our service.

Most companies know the number of farm electric customers served by them and they also know the total number of farms in their territory. By dividing one by the other we get the percentage of total farmers served. As an example, where this is twenty-five per cent, it is only natural to draw the conclusion that to serve all of the farmers in the area, it would take three times as much money for farm lines as has already been spent.

The big problem in this connection is to definitely determine how fast the utility can extend lines into the country and how it can finance the cost of these lines. This might be stated a little differently and say that the problem is to determine how fast lines will have to be built into the country to reasonably meet the demands for service and how can these lines be financed.

Before any utility executive can answer these questions intelligently, it is necessary to make a survey of the entire farm area served by his company. A careful survey of the farming territory of any utility company is likely to disclose some rather surprising things. For this reason and because of its value to the utility management, I recommend that you make such a survey, if you have not already done so.

Survey of Farm Area Served by Company

I am quite familiar with one such survey and will describe it briefly to you to clarify the point I am trying to make. This particular company learned from government figures that there are approximately 46,000 farms in the territory it serves. Since it already served approximately 15,000 of them, it appeared that the rural electrification job had been about one-third completed and two-thirds remained to be done. However, a survey of this territory, through the use of government soil maps and information that the employees of the company had, showed that about 8000 farmers listed in the census were located in a very sandy area where the soil was very poor. The farmers living in this area

not only could not economically use electric service but for the most part were not interested in it. It was decided that the area above described would not support rural lines and should be eliminated from any further consideration. This reduced the total number of farms from 46,000 to 38,000—this being the number of farms listed in the census that had fairly good soil.

This particular company had been in the business of extending service to farmers for many years, but even on lines that had been up for five or six years in territory where farmers were reasonably prosperous, only three out of four of the farmers were customers of the company. It should be remembered here that in the census figures places were counted as farms which you would hardly recognize as such when you drove past them on the highway. It, therefore, seemed proper to reduce the 38,000 farms by 25 per cent in trying to arrive at the number of prospective users of electric service. This reduced the number from 38,000 to 28,000. In other words, when 28,000 of the 46,000 farms in the area get electric service, it appears from this survey that the business of extending lines to farmers will have been finished. The utility company serving this area had 15,000 farm customers so that instead of the job being one-third finished, it was half finished.

The survey, however, disclosed other facts which are pertinent to this study. In this area there are a number of municipal utilities, most of whom buy their electrical power requirements from the utility making the survey. A number of these municipal utilities have extended their lines beyond the city limits and are serving farmers. In addition, there are a number of small privately-owned utility companies in the area which serve quite a number of farmers, buying their energy for the most part from the larger utility serving the area. While no one of these municipal utilities or small companies served very many farmers, in the aggregate they do supply electric service to about 5000 farms. That again changes the picture and we find there are 20,000 farmers now getting electric service in the area being surveyed. There are, therefore, only 8000 additional farm customers in the area to which any lines must be built and not all of these will have to be built by the major utility company serving this area. Before the survey was made and before much thought had been given to the matter, the management had the idea that the rural electrification job in this area was only one-third finished, but after the survey, it found that the job is more than two-thirds finished.

This survey is important because it gives to the management a correct picture of the size of the job yet to be done. A manager of a utility company might not give serious consideration to an extensive rural electrification program if he thought the job was only one-third finished, whereas the same manager might be willing to back such a program if he knew that the job was two-thirds done.

For this survey you can make good use of the following:

Topographic sheets of the United States Geological Survey, Department of Interior.

Soil survey sheets of the Bureau of Soils, Department of Agriculture.

Rural route maps of the Post Office Department.

Progressive military maps of the United States War Department.

Local maps.

The information given in these maps, together with the information held by certain employees of the company and that on existing company maps, usually makes it inexpensive and rather simple to make the kind of survey I have just described.

With this information, the utility executive knows the size of the job yet to be done and can lay out a definite plan for taking care of it in any way he thinks best. The important thing is to make a plan even though it may take four or five years to carry it out. Once the plan is made, frankly tell the farmers in the territory to be served when your plan contemplates reaching their farms. The farmer may demand service today and yet may be willing to wait a year or even two years or longer to secure this service, providing he feels that he is going to get it at the time you tell him he will get it.

Rome was not built in a day and this job is too big to be completed in a year or even in two or three years, but there is no reason why we cannot make plans to take care of the job so that not only we will know what we propose to do but also the farmers will have information on what to expect. In many cases the demand for service by farmers may be so urgent that it is impossible for the utility company to take care of it in time to satisfy these farmers and in other cases it may be that the utility executive does not wish to invest the necessary amount of money in farm lines to meet the urgent demands for service.

Co-operation with R.E.A. Co-operatives

In either of these situations, R.E.A. co-operatives will probably be formed. Under such conditions we can certainly have no quarrel with the formation of a co-operative and should in fact encourage it and help it get started. We cannot object to the farmers forming a co-operative to get service which the utility cannot supply or is not willing to supply. The utility companies and the farmer co-operatives will each gain a great deal if their representatives are on friendly terms, meet together, and work together in the common job of carrying electric service to the farmers. There should be no raids by either party on the business of the other party, for there is no reason for any lack of complete understanding between them. Only through fair and honest treatment can an orderly farm electric development take place.

Make Lines Self-Supporting

The biggest job that is confronting utility operators in connection with rural electric development is the job of making these lines self-supporting. We all believe and can probably prove that the average farm electric customer is using only a small fraction of the service that he could economically use and should use. However, the fact remains that the average farm customer, at least in the non-irrigation districts of the country, does not increase his use of electric service very rapidly. Our problem, therefore, is to develop an effective plan of building electric loads on the farm which will be profitable to the farmer and also profitable to the utility so that the farmer can afford to pay a larger monthly bill for his service and thereby increase the utilities' gross revenue per mile of line which is necessary to make these lines self-supporting.

It is well at this time to take a look at what happens on the farm when electric service is first brought to it. Farmers without electric service use kerosene, gasoline, horses, tractors, gas engines, and humans as their source of power on the farm. When we take electric service to the farm, we are bringing a new form of power which in time works a revolution on that farm.

Whenever a new and different form of power has been brought to and accepted by any industry, it has revolutionized that industry. When steam engine power was applied to the shipping industry, it brought fundamental changes.

It changed the shape of the boats. It changed the type of people who manned the boats. It changed the methods of carrying on the shipping business. It certainly revolutionized that industry.

When steam power was applied to transportation on land, it completely transformed that industry. The stage coach had to give way to the railroad train. The people who operated the railroad train had to have different training from those who handled the stage coach and wagon. The application of power to transportation on land was again revolutionized with the coming of internal combustion power which made possible the automobile and the truck.

With the coming of steam power, great factories were established over the country with their many line shafts, belts, and pulleys. When electric power was brought to the factories, they went through another transformation. The line shafts, belts, and pulleys disappeared and individual motors took their places. All through our history the introduction and acceptance of new forms of power have literally revolutionized our industries. It seems to me, therefore, that we will all agree that the bringing of electric power to the farms of this country will revolutionize agriculture, will bring about great changes in farm equipment and in the method of carrying on farm work.

People do not change habits quickly. The farmer does not change his habits quickly and we cannot expect this so-called revolution in farming methods to take place in too short a time. As a matter of fact, it will probably take a generation to bring it about and it will require the expenditure of a considerable amount of money on the part of the farmer and will require a lot of help from all the people who are interested in electrifying the farms of this country.

Where electricity has been brought to the farms, many changes are taking place and it is one of our big jobs to see that these changes are speeded up and made in an intelligent manner so that the farmers will receive benefits in excess of the costs. In order to furnish this help, it is important that the utility management know what changes the farm electric customers of his company have made in substituting electric power and other forms of power. It is also important to know what the farmer himself wants to do in the way of increasing the use of electric service on his farm. The utility management must also find out the things that electricity can best do for the farm customers of the company. Unless these things are known, it is impossible to plan an intelligent load-building program for that company. Here again I suggest that the management of any utility that has farm customers make a farm-to-farm survey and get accurate information on what the farmer is doing with electric power, what he is thinking about, and for what he could use electric power to advantage on his farm.

Survey of Customers

This survey will bring to light many startling things. Most of the farmers used kerosene lamps before they got electricity. One 25-watt electric bulb is so much better than a kerosene lamp that the farmer is usually satisfied with this kind of electric lighting. When you make a survey of your farms, you will be surprised at the percentage of 25-watt bulbs in use. This survey will probably show that 90 per cent of your farm customers have a radio, an electric iron, and a washing machine. You will find that most farmers are interested in an automatic water supply but few of them have it. Thus the survey will give the management the information which enables it to set up an intelligent, efficient, effective load-building program.

Such a survey can be made in a way that will greatly improve public relations. It should be made by someone who understands farming. He should approach the farmer from the angle that his company wants to find out how his electric appliances are working and what he is thinking about in the way of further electrifying his farm so that the company can plan ahead and always be ready to fully meet his needs. The whole attitude of the man making the survey should be one of helpfulness to the farmer. Where this method has been followed excellent reaction from the customers has resulted.

Load-Building Plan

When the survey data have been summarized and analyzed, it is then important to make a definite load-building plan. This plan will vary in different sections of the country and with different utilities. The plan must be made to fit the conditions disclosed by the survey if it is to be successful. Then, to carry out the plan requires a great deal of patience, for we must not forget that in getting the farmer to use electric service, we are revolutionizing farming and the farmer's habits.

You may be interested in some of the factors that utility companies I am familiar with have considered in building load on the farm electric lines. In some cases the various townships served have been rated financially and the load-building effort concentrated in the townships where the best farms were located. It was felt that the electric load could be increased most rapidly in these areas with the least effort and the results seemed to bear out this thought.

The farmer likes to deal with someone he knows and has known for some time. There is more resistance to dealing with strangers in the country than there is in the city. The farmer must have confidence in the man he deals with before he will deal with him. If he has known the man who approaches him for some time and has confidence in the honesty and ability of the man, much better results will be obtained than where a comparatively new man is put on the job.

The farmer, of course, has dealt for years with the local appliance dealer, local implement dealer, hardware man, and these men are, therefore, in a position to effectively help build farm electric load if we, the utility people and managers, can sell them on the idea of doing so. We should develop a cooperative plan of electric load building with these local business people who thoroughly understand the farmer and his problems and who are acquainted with him personally and in whom the farmer has confidence. The utility representatives should meet with representatives of these dealers and talk over with them the problem of building electric load on the farm and try to develop a cooperative plan which will be satisfactory to every one concerned and fair to all.

A financing plan of selling appliances to farmers should be so set up that the farmer pays for the appliances at the time he sells a crop or livestock. Many farmers get a large part of their annual income during two or three months of the year and it is at this time that they pay many of their bills. Our load-building plan should fit into the paying habits of the farmer and permit him to pay for appliances in those months when he has his greatest income and not have to pay monthly as we ask our urban customers to do. He, of course, has to pay his electric bill monthly, but it does not follow that he should have to pay for his appliances monthly if he elects to buy them on the partial-payment plan.

Most farmers use the kitchen and dining room a great deal more than the

rest of their house. Therefore, special attention should be given to the lighting in these two rooms. Some companies are putting on a special rural lighting campaign built around the kitchen and dining room.

In most sections of the country there are organized groups or clubs of farm boys and girls, such as the 4H clubs in many states. It is important to have the home service adviser of the utility company meet with these groups and also with other farm organizations and put on demonstrations on how electricity can be applied in the farm home. At these meetings use can be made of films and records which give information about the use of electric service. In this way the farmer can get a better understanding of what electricity can do for him—how it can help him in his daily work.

Some companies are holding cooking schools in farm homes where the neighbors are invited to meet in one home and have the home service adviser put on a cooking demonstration. All of these are, of course, for the purpose of acquainting the farm electric customer with the value of electric service.

There are now thousands of county agents throughout the country who devote their entire time to helping the farmers improve working conditions and making them acquainted with new and better ways of doing things. It is important that county agents be fitted into your load-building program to see that they are well informed on the value of electric service to farmers.

The load-building program should include some special work on the minimum user. Where a rather large minimum bill is a part of the rate, many farmers are not using as many kilowatthours as the minimum bill entitles them to. Often this brings about ill-feeling on the part of the customers toward the company. They feel they are paying for something they are not getting, but they do not seem to know how to change their methods so as to use up their minimum bill. This seems to be a strange situation, but it exists nevertheless and the load-building program should provide a means of getting the minimum bill customer to at least use the kilowatthours to which he is entitled. We will never get a customer to use more than his minimum bill until we first get him to use the kilowatthours paid for by the minimum bill.

Some companies are making great efforts to completely electrify so-called demonstration farms at various points in their territory. The demonstration farm is valuable if the farmer who owns such demonstration farm can be persuaded to buy and pay for the equipment of his farm. Unless he does that, the other farmers do not place much value on the fact that this particular farmer is using all of these appliances. If a farmer in any particular district can be sold to more or less completely electrify his farm and be sold on the value of the service, then it becomes a real demonstration farm which is, of course, valuable in building load. Where such a condition exists, a utility can afford to pay the farmer for the inconvenience that he is put to in having other farmers come and look at his layout.

It is my opinion that the best method for the utility to contact the farmer in a load-building program is through a rural local representative meter reader. He should be a man who is acquainted with the farmers in the territory in which he works, has their confidence, reads a limited number of meters each month, spends a short time with the farmer on each month's visit if the farmer is not busy, helps the farmer decide what he should have on his place, takes care of minor service troubles, and sees that the farmer's appliances are in use. This man really gets to know the farmer and knows what the farmer is thinking about. He collects a lot of valuable information from the farmer which is important to any load-building program. This local representative can sell to the farmer the appliances which his company handles and can pass on to the implement dealers, plumbers, and hardware people, who are cooperating in the electric load-building program, such information as they are interested in. This plan has many advantages in that during considerable periods of the year the farmers are quite busy most of the time and they do not want to talk to anyone about buying something, no matter what it is. This man can adjust his work so that he can talk to the farmers when they have time to talk to him and he can read meters and do other things when they are busy. This method also holds down transportation costs to a minimum and the farmer is not being confronted with a lot of specialists for each particular operation of the company. This man becomes practically the sole representative of the company to the farmer and this all helps build load.

The farmer must be supplied regularly with intelligent authentic information on the value of electricity in his farm operations, and I know of no better or less costly way to do this than to send him the magazine, *Electricity on the Farm*. There is undoubtedly other printed matter that serves this same purpose but I am more familiar with this publication than any other and I recommend it to you people who are not now using anything of this kind.

The farmer is constantly bombarded with all kinds of advertisements and articles which tend to make him want to spend his money for this or that. Unless we constantly keep before him articles dealing with the value of electric service on the farm and what it will do for him, we will not get him to invest a proper share of his yearly spendings in electrical appliances.

At the present time farmers living in non-irrigated areas do not use more than an average of 100 kilowatthours per month. We know that the average farmer can use economically 500 kilowatthours per month, for many average farmers are doing this now. Farm lines will become self-supporting before we reach an average consumption as high as this. The job we have, therefore, is one that can be successfully solved. The only thing that is necessary is to collect the facts carefully, make our plans complete and definite, and then follow them through with a lot of patience but with a lot of determination.

A New Standard

(*Continued from page* 152)

ation winning over darkness, illness and drudgery, our task is to ever remind the public, unblushingly, of the contributions of electricity to this new order of freedom, and to use our cooperative industry strength in achieving our common objectives.

As long as we continue to employ an increasing intelligence in the use of the old as well as the new formulas and products—with sympathetic patience one toward the other—then will we realize more quickly new Electrical Standards of Living, as expressed in the older prophecy of Stuart Chase, when he wrote—

"Power for industry or business or agriculture are all vastly important, but from a broader point of view, they take second place to the promise of power for actual human living. Here lies the transcendent role of electricity in the years before us."

Dawn of a New Day Through Better Light-Better Sight

By J. E. North

Director Domestic Sales, The Cleveland Electric Illuminating Co., Cleveland, Ohio

An address before the Sixth Annual Sales Conference, Edison Electric Institute, Chicago, March 21-24

THE Better Light-Better Sight movement is now in its sixth year. It has been, in many ways, one of the most outstanding inter-industry programs of all times. Born in the depression, it has never seen a year of normal business. Yet year after year it has gone forward—holding the interest and enthusiasm of its sponsoring industries.

Some of you remember that day in March, 1934—here in Chicago—when Merrill Skinner, then Chairman of the Lighting Committee, presented to the General Sales Committee a plan for an inter-industry movement to promote Better Light-Better Sight.

The plan was an ambitious one. It was proposed that the electrical, optical and paint industries be induced to unite in one common promotional program. Safety organizations, professional groups and others would also be invited to participate in a movement which would make America conscious of the need of protecting eyesight—of the human welfare side of Better Seeing.

The idea caught the imagination of the Sales Committee. And then and there the Better Light-Better Sight movement was born.

Shortly afterward, as you all know, the National Better Light-Better Sight Bureau was formed with membership embracing nineteen national associations and groups representing several major industries.

The movement has been a success. And I believe that this success is due to more than chance. It is due to more than the mere energy and initiative of any group or groups. The Better Light-Better Sight movement was founded on the firm foundation of human needs and human welfare. It has been a success because it added something to the joy and the safety of the comfort of living.

Today, largely because of this movement millions of children in our schools and homes enjoy better seeing conditions. Millions of students find it easier and less of a strain to acquire knowledge. Millions of workers enjoy a new freedom from the strain and handicap and hazards imposed by poor light. Millions of homes are happier places to live in.

MR. NORTH

The benefits have not been confined to lighting. The number of people who have their eyes examined each year has increased greatly since this program started. And let me say that the whole optical industry is keeping pace with the Better Light-Better Sight movement. Throughout the optical profession the importance of good light is more and more being recognized, until today a high percentage are either prescribing good light or strongly recommending it.

The paint industry has not been idle. From the beginning, the National Paint, Varnish and Lacquer Association, through the National Clean Up and Paint Up Campaign, has consistently endeavored to promote and increase the public consciousness and the consciousness of the paint industry that "paint and light are partners." Emphasis has been placed upon the benefits to be derived from modern lighting equipment with walls and ceilings painted in proper light-reflecting tints.

Inspired by the national headquarters in Washington, some of the large individual paint companies have issued very attractive literature on the subject of better lighting and have recommended certain of their own products as being especially valuable from the light-reflecting standpoint, with the emphasis upon increased efficiency of workers and conservation of eyesight.

In its free mat service to newspapers, which embraces the offering of thousands of newspaper mats annually, the National Clean Up and Paint Up Campaign Bureau in its 1939 series will contain a substantial number of mats devoted to Better Light-Better Sight.

As a public utility man, I am conscious of the fact that we in the electrical industry are apt to measure the success of this program mainly in added kilowatt hours or in sales of lighting equipment. And I think we are likely to forget that the good will benefits may far outweigh the dollar and cents value of added load or increased sale of equipment.

Certain it is that such a movement never could have held together and gained momentum through all these depression years had it not been based on deep fundamental values to the public. Without this human welfare background, can you believe that this program would have inspired the tremendous volume of editorial support in magazines and newspapers which it has had from the beginning?

Would the medical profession have recognized it as they did last year in a splendid series of articles in *Hygeia Magazine*, and as they have in many other ways? Would educators and public officials have encouraged better lighting as they have done repeatedly during these latter years?

Today, when we stand at the thresh-

old of this sixth year of Better Light-Better Sight, I feel that we as an industry should reaffirm the principles which created this movement. After all, our job is only barely begun. In spite of impressive statistics we have moved only a little way out of the dark. Actually a very small percentage of homes today are lighted for better sight. And in commerce and industry we have gone only a few steps of the way toward better seeing.

We all take off our hats to the fine job the optical group has done. Yet I am told that while 70 per cent of our population needs eyeglasses, only 30 per cent actually have them today.

I would like to show you just one of the measuring sticks by which we can gage our progress. Many of you remember that day in the Traymore Hotel in Atlantic City, when the first models of I.E.S. study lamps were shown—tall and skinny and rather lacking in decorative value. Nevertheless our industry concluded that we ought to set a goal of seven million I.E.S. lamps to take care of the needs of students—to put one in every home with a child of school age. If you include lamps of I.E.S. type, we have passed that seven million mark already, and we haven't scratched the surface. Because it quickly became apparent that every member of the family old enough to read appreciated this new kind of ample, glareless light. So in 1935 it was decided that the seven million mark was too low, and it was raised to a ten million potential.

But as home lighting advisers began recommending I.E.S. lamps to the tune of one, two or three per living room, to say nothing of other rooms in the house, the potential jumped again. What is it today? Frankly, nobody knows.

All of you will readily admit that fine as the results have been to date, they are only a sample of what we may do in the future through cooperative effort. And as we face this sixth year of the Better Light-Better Sight movement let us look at the better tools we have to work with:

1. The Science of Seeing has given us a wealth of useful knowledge about eyes and seeing. Year by year this knowledge has grown, until today there is a substantial amount of factual data which can be used in our educational work, through our advertising, and in contacts with our customers.

2. Science has developed accurate devices for measuring light, visibility, and brightness. With these instruments we can obtain authoritative data of priceless value to the specialists who are studying lighting in homes, schools, offices and factories.

3. Manufacturers have been developing new lighting sources which will aid in the development of commercial and domestic markets. Fluorescent lighting, high intensity mercury, silvered bowl Mazda lamps are examples of these developments. New and better light-control equipment has been developed for the commercial and industrial fields.

Talking it over in the Promotional Exhibit Room

4. The development of new and safer highway lighting systems is one of the high spots of the past few years. Throughout the country there are now many experimental stretches of highway which are developing public consciousness of the need for better, safer highways. The Better Vision Institute, through literature and radio broadcasting, is aiding the campaign for safer driving.

5. In the optical field many new devices have been introduced to aid in the diagnosis of eye defects and in the proper correction of those troubles. First of all, there is the new reading technique equipment, consisting of two units—one photographing the movements of the eye—and the other an exerciser for the eye to read faster and with better comprehension. As indicated by the optical manufacturer, these two new developments are pointless and ineffective without proper light. Then there is the new equipment for checking the degree of night blindness, an instrument to determine the condition of the eye as affected by harsh, glaring headlights in night driving, and the new lamp for medical operating rooms designed by a large optical manufacturer, which provides high intensity but controlled shadowless illumination with a minimum of heat on the operators. Both of these are definitely linked with proper lighting. Another of great significance is the development of a new illuminated Snellen Chart Series in which the light factor on the chart is variable but accurately controlled—likewise the light in the testing room. This comes pretty near to recommending proper light for all conditions under which the eyes are required to work and in the estimation of optical authorities is another approach to light prescribing as part of the standard routine of the optical practitioner.

6. Increased lighting consciousness on the part of the public. Everywhere we see signs of this awakening consciousness of the need for Better Light-Better Sight. The rate of eye examinations is up sharply. The average wattage of Mazda lamp sales is sharply upward. Sales of pin-on-wall lamps, I.E.S. lamps, and other types of home lighting equipment show a constant upward trend, and all this is the best evidence in the world that the public is learning to believe in the benefits of good light.

7. And lastly, we have this year two great events which will inspire the public toward better living, and which, in themselves, will depend largely on light for dramatic effects. I refer to the two great World's Fairs—one on each of our seaboards. Through these great expositions we will greet the DAWN OF A NEW DAY. A day when science is bringing to America new comforts, new pleasures and new aids to health and happiness. I believe that this awakening of America to new and better ways of living can give fresh impetus to the Better Light-Better Sight program for 1939 and 1940.

And now we present a comprehensive Better Light-Better Sight Plan for the fall of 1939.

First: I am convinced that we of the electrical industry should rededicate ourselves to the broad humanitarian principles that have carried us thus far. I believe that we should redouble our efforts to tell the public about the benefits of Better Light-Better Sight in terms of eye protection, health, safety and all the other advantages it brings to human lives.

Second: That we capitalize the drama of the San Francisco and New York Fairs by adopting, for use in our adver-

tising, the slogan "The Dawn Of A New Day—Through Better Light-Better Sight." And that through cooperation with World's Fair officials we try to publicize this tie-up with the "World of Tomorrow" theme.

Third: That our industry set aside October, 1939, as BETTER LIGHT-BETTER SIGHT MONTH, and that all participating groups and industries be urged to join in celebrating and publicizing that fact. And that the Mazda lamp and fixture manufacturers be urged to cooperate in giving this month wide national publicity.

And here I bring you some news! This fall the optical people, through the Better Vision Institute, will put their shoulders to the wheel in a national way. The last week in September is to be designated by them as *Better Vision Week* so that throughout the country members of the optical group will be prominently stressing the need of eye protection. It will be the closest cooperative relationship we have ever enjoyed with this group on any national basis. The opening of school—the ending of daylight saving—have always given impetus to eye examinations. And those same forces are potent factors in the promotion of lighting, as we all know. Thus, BETTER LIGHT-BETTER SIGHT MONTH will be ushered in under more promising auspices than any lighting activity of the past.

Now as to the practical side of this fall program which the Bureau has prepared.

First of all, since this is an "Exposition" year, many local utilities or groups will want to stage Better Light-Better Sight shows or exhibits. The ideal timing for such shows might be to begin the last week in September, capitalizing the activity of the optical group, and drawing on them for much interesting exhibit material. The Better Light-Better Sight Bureau will supply on request suggestions for exhibit material and sources from which it may be secured.

A wealth of advertising material and ideas will be available, either directly through the Bureau, or correlated by the Bureau from available sources—such as the Mazda lamp manufacturers and the Better Vision Institute. This advertising will cover both the educational and the more commercial side of the program.

Radio scripts will be available for spot broadcasting.

Recordings will be available—tested programs produced by the Better Vision Institute.

A special BETTER LIGHT-BETTER SIGHT MONTH display will be prepared by the Bureau.

A new slide film, educational in nature, and tying in with the DAWN OF A NEW DAY theme, is now in preparation by the Bureau.

Paint and Varnish headquarters will offer plenty of fresh tie-in advertisements.

We have never before been ready, so far ahead, with a complete Better Light-Better Sight Plan for fall. And never before have we had so many favorable factors working with us for a big, national lighting program.

1939 looks like a better business year.

Kilowatt hours from lighting should reach an all-time high.

I.E.S. lamps and other equipment sales should see their biggest year.

Plans for both national and local promotions on the part of lighting manufacturers and utility companies indicate bigger and more aggressive action than ever.

Thousands of retail outlets are being educated and brought into the picture.

It will be a successful year if the electric utilities of the country continue their leadership in all of the communities served. The extent of utility initiative, energy, and aggressiveness in local sales and promotion definitely determines the progress and accomplishments of Better Light-Better Sight both locally and national. It has been so from the beginning of the movement and undoubtedly will continue to be so in the future.

Once more let me say that the financial success of this movement—and its success as a goodwill builder—has been built and must continue to be built on the contribution it makes to human welfare.

Utility sales executives from the four corners of the United States are seen in this group in the lobby of the sales conference meeting hall

Better Light—Better Sight—Better Schools

By U. E. Diener
Superintendent of Schools, Fremont, Ohio

An address before the Sixth Annual Sales Conference, Edison Electric Institute, Chicago, March 21-24

BEFORE I finish, I am certain you will agree that the title of this paper is an appropriate one. Not only will I relate this relighting story, but I will endeavor to bring you some results relative to the beneficial effects of this program at Van Wert, Ohio.

In the autumn of 1928 I was honored with the appointment as superintendent of that fair city. My first entrance to the high school building was on a murky, misty November morning. I was depressed with the lighting conditions I found. I resolved then and there something would have to be done about it.

I had left a school system at Celina, Ohio, where an old building had just been rewired and fixtures replaced following a repainting job. I knew something of what could be done even before the day of indirect lighting—Trojan fixtures having been used. Today I have that one regret—that the type of lighting available several years later and used at Van Wert was not available for the Old West Building at Celina, Ohio.

As soon as I got my bearings, so to speak, I showed some interest in this matter. The manager of the local Ohio Power Company, being a member of my board, soon became enthusiastic. Investigation proved the wiring too light to carry the added load and the cost was beyond funds then available. About four years later, with almost an entirely new board, we tried again without success—too much depression this time. It was the school year of 1932-33.

But finally in the early part of 1937 the Ohio Power Co. began to urge us again. Their engineering department furnished plans and estimates for revamping our lighting in this high school building.

This time we met a receptive school board and in our budgeting we had provided some funds for this undertaking. And let us not forget, a board of education is more easily convinced if money is available to pay the bill. In your selling do not overlook this important

MR. DIENER

fact. Proper authorization was forthcoming and soon the work began.

First, I want to tell you what the old lighting system was like. When I say it was bad, I mean bad. It really was terrible. The building was 25 years old, having been erected in 1912, and it was not intended to house as many high school pupils as were being crowded into its more or less unfit classrooms.

The wiring was entirely too small. Even the addition of larger lamps in the old antiquated fixtures served only to pull down the voltage with the consequent result of lowering rather than increasing the foot candles of illumination. This lighting was just a little beyond the kerosene lamp stage.

All of the fixtures except those of the study hall, which were a closed spherical bowl type, consisted of a straight tube of metal on the end of which was fastened a socket and a fluted glass, open-end lamp shade about eight inches in diameter.

Just imagine the diffusion and the quality of light we got from them. Classrooms had from two to four such fixtures, each carrying a 60 or 100-watt lamp. Think of it! The maximum of 400 watts per classroom. What a quantity of light! Fortunately, the board's office was equipped with a cross-arm type arrangement on the end of a straight tube carrying four lamps. You know the type.

I said fortunately, because this fixture carried 100-watt glaring lamps. The board meetings were held at night, and after the board members blinked at these lamps for three or four hours, it was not hard to convince them that the lighting was bad. Several have confessed since that they left the meetings frequently with headaches caused neither by the tobacco smoke nor their heavy thinking. That one fixture alone, I feel, was our greatest ally. Another hint to the wise salesman.

This building housed about 650 pupils in a total of 24 classrooms. Twelve of them 25 by 30 ft.; eleven 25 by 26 ft., and one large study hall 52 by 100 ft. The rectangular rooms carried two rows of fixtures, one on each side of the room, while the square rooms carried a single row of two fixtures down the middle. The study hall had eight 200-watt lamps aided by some skylights which served more as reminders of falling weather and the negligence of the janitor than as an aid to better lighting. This study hall, as well as many other rooms, measured as low as 2 foot-candles.

You say, why permit such a deplorable condition to continue so long? For the same reason that many such and even worse conditions exist today. It isn't easy to convince school boards to spend so much money for one project when funds are scarce and so many other worthy projects waiting.

It was not until we had experienced the blessings of our new illumination that any of us were fully aware of the inadequacy of the previous lighting. Of course now all are convinced. No money was ever spent which brought such large returns.

What We Did

The entire building was rewired according to modern specifications, and even new transformer vaults were in-

stalled. The square classrooms were wired for four outlets, two rows with two each on independent switches carrying 500 watts each, a total of 2000 watts versus a maximum of 200 before. The rectangular classrooms were wired for six outlets, three rows of two each on separate switches for each row with 500-watt lamps in each for a total of 3000 watts versus 400 watts under old wiring.

The study hall mentioned above was equipped with 18 indirect fixtures carrying 750-watt lamps each, which changed the reading on the sight meter from 2 to 37 foot-candles with a perfect diffusion and a delightful quality. This latter statement equally applies to all the other rooms.

The entire building was wired for photo cell control at the small additional expense of $375. We thought it worth the gamble. A photo cell tube was installed to control two rooms of similar outside exposure. This experiment proved so successful that the entire building is now equipped with photo cells.

Painting and Refinishing Program

In addition to the rewiring the old finish on all woodwork, which was very dark, was removed and brightened up a light oak color and varnished without too much glare. All furniture was refinished and brightened up.

We painted the ceilings flat white and tinted side-walls a pale green. In short, everything but blackboards was altered for better lighting. I wish there was something that could be done about that. Those blackboards stick out like a sore thumb in a well-lighted room. Some day white boards may be a success.

Other Results

After the first shock of our sudden awakening to our improved condition had somewhat subsided, I had a hunch some definite results were discernible to the human eye; consequently, I waited for a foggy, misty, murky day. By previous arrangement with the teacher in charge of the study hall, the lights were not switched on the first half hour. This worked beautifully. The students were unsuspecting because the workmen had been interrupting our lights for intervals of various lengths for some time. I carefully observed posture, facial expression of students and the general room atmosphere. At the end of the first half hour, the lights were switched on. The immediate change, as well as the change that took place the remainder of the hour, was remarkable. This one experience was enough to convince me that we really had something. Pupils sat upright in their seats with feet flat on the floor—no more crouching; their countenances lighting up immediately and the lines in their faces caused by tense muscles had been erased. Seeing was truly believing.

Nothing reveals unclean conditions like plenty of light. Even the searching light of truth reveals unsound facts and conditions. Briefly, our janitors found dirt which had escaped notice previously. A new sense of pride possessed them.

They fell into the spirit of the whole situation and mopped and dusted more effectively than ever before. Better light insures more sanitary conditions.

Teachers began staying at night doing their home work in the school building, giving as their reason—the lighting was so much better than at their residence. This occurred at the end of the day, whereas, under the old lighting, they were unquestionably more weary after the day's work.

Student morale and discipline showed a marked improvement. The well-lighted halls removed temptation to loitering, mischievousness, etc.

Late in the school year the principal and I began to suspect that scholarship was showing some improvement. Hence we decided to make a study along this line. Before this was undertaken, I accepted a position at Fremont, Ohio.

But several weeks ago I wrote Mr. Bowdle, the principal, and told him I wanted some data for this occasion on that study of pupil achievement and told him to collect the data for me and send me the bill.

To my pleasant surprise, Mr. McMillen of the Ohio Power had already made such a study and supplied me with the results shown in the above table.

I cannot help being mercenary enough to convert the decrease in pupils' failures, the "F's," for there is where the repetition of subjects occurs, to a dollars and cents basis.

4.737 of 2305. = 109.0265 subject failures

13.95 of 109.0265 = 15.2 + decrease in subject failures

If we assume $20 per subject as the average cost, then 15.2 times 20 equals $304 per semester savings in teaching cost on repeating failing subjects or $608 per year for the first year. It is only fair to assume that this percentage of increase may grow.

I think this cost item is significant in itself. Of course we may be giving too much credit for this decrease to the better lighting. Nevertheless, it is the only factor in the situation that was changed. All others remained constant. True enough, one year as hinted above may not be an adequate test. It will be interesting to note future studies.

Neglecting the money value entirely, we can give consideration to the health factor. I am convinced that better light does relieve nervous strain and frees physical energy for school tasks. How much it is hard to guess. I feel we can add nothing that will contribute so much to the health and physical well-being of the individual as better light.

(Continued on page 138)

VAN WERT HIGH SCHOOL—SCHOLASTIC RATINGS OF STUDENTS

	Enrollment	No. of A's	% of A's	No. of B's	% of B's	No. of C's	% of C's	No. of D's	% of D's	No. of F's	% of F's
1935-1936 1st Semester	2380	218	9.16	602	25.2	846	35.5	568	23.25	146	6.14
1935-1936 2nd Semester	2195	231	10.52	553	25.2	737	33.6	557	25.4	117	5.3
1936-1937 1st Semester	2342	170	7.2	568	24.3	1015	43.3	498	21.2	91	3.9
1936-1937 2nd Semester	2304	195	8.5	549	23.8	987	42.8	491	21.3	82	3.5
1937-1938 1st Semester	2378	222	9.3	581	24.4	1015	42.7	448	18.8	112	4.7
1937-1938 2nd Semester	2358	229	9.7	567	24.1	977	41.4	504	21.3	81	3.4

Total Analysis

	Base Years 1935-1937 Enrollment—2305 % of No.	"AFTER" Year 1937-1938 Enrollment—2368 % of No.	% of Increase or Decrease
A	8.85	9.53	7.68 increase
B	24.64	24.25	1.62 decrease
C	38.83	42.05	8.29 increase
D	22.95	20.11	12.37 decrease
F	4.73	4.07	13.95 decrease

The above data on subject grades include only subjects requiring classroom preparation. Subjects such as music, gym, etc., are not included. Total enrollment means subject enrollment—to obtain pupil enrollment, divide by four.

A New Standard of Electrical Living

By Carl M. Snyder

Manager Appliance Sales, General Electric Company, Bridgeport, Conn.

An address before the Sixth Annual Sales Conference, Edison Electric Institute, Chicago, March 21-24

SOME of you may recall the very interesting paper prepared in 1936 by Mr. L. A. McArthur, vice-president of the Pacific Light & Power Company, entitled, "Home Electric Uses Depend on Sales Efforts." One part of this paper compared the striking similarity of the increased annual kwhr consumption per residence meter with the investment in merchandise or equipment. Or, to put it another way, load increased in almost direct proportion to the customers growing investment in equipment. Mr. McArthur stated that in order to double the 120 kwhr consumption on his lines to 2400 in five years, an investment of at least $500 per family, in merchandise, was indicated. This factual formula immediately reminded us of the wisdom and necessity of constantly doing a better job in our overall competition for a larger share of the consumer spending dollar—a task that is always before us. Mr. McArthur then conducted a survey among a selected group of diversified residential customers, who were asked this question, "If you had $500 to spend on your premises, what would you like to do with it?" Far less than half the families interviewed even thought in terms of electrical appliances, and those who did, placed their electrical needs well down the list of other more desired improvements.

The obvious conclusions we would draw from these two facts, are:

1. That we must sell more appliances to build more load.
2. That the sale of appliances bears a strikingly direct ratio to increasing load, and
3. That we haven't done a very good job in our struggle for the will-o'-the-wisp of public acceptance.

Similar conclusions have been reached by many of you in your own investigations. The constant cry, as a consequence, has been that the only unfailing remedy must lie in lower and still lower prices. In this connection, let's look at the record a moment. Using the annual sales figures compiled by *"Electrical Merchandising"* as my base, I have tried to

MR. SNYDER

obtain from them a few statistics that would disclose the facts I was seeking. The results have seemed rather conclusive and somewhat startling to me.

A quick survey of these figures, Fig. 1, indicates clearly the tremendous reduction in unit retail prices of appliances over a ten-year period, with the public the gainer. This is a healthy trend—one we should continually seek—and is again more clearly defined in Fig. 2, which portrays the average reductions in retail prices in selected products over the ten-year period. We can have no quarrel with this trend—as long as it is orderly. I present the figures here only as a reminder that rather substantial progress has been made in price reduction. But in Fig. 3 is the sorry commentary. While we have been marking our reductions in prices, with some general increase in volume, we are far from attaining Mr. McArthur's objective in getting an improved slice of the consumer's dollar. Whereas the average American family expended $59.94 annually for electrical merchandise from its budget in 1929, last year we received only $34.47. Anticipating the possible suggestion that this was probably due to a poor year, I have listed 1937, a good year in appliance sales, and here our "take" was less than in 1929 ($52.60). Now, while we are all in sympathy with the production of better merchandise at lower costs, it surely is not an indication of inordinate greed to expect to maintain at least the dollar "take" from the family's pocketbook, enjoyed ten years ago. This trend, more than any other figures I have been able to accumulate—and regardless of what excuses we may offer for the results—must cause us wonderment and, surely, some concern. Can we find in these figures very much satisfaction in our dream of great progress in the Electrical Standard of Living?

Now, on the other hand, the Electrical Service Companies of America have done a much better job in controlling the sale of your commodity, the kilowatthour. While you, too, have moved up in your sale of kwhr per customer, at a continual reduction in the price per kilowatt, you, nevertheless, as indicated in Fig. 4, have not only maintained, but have improved upon your dollar "take" per family, in direct contrast to the trend in merchandise sales. It is obvious, however, that even here the performance in load-building would be greatly accelerated if, between us, we could improve, or at least maintain, the customer's dollar expenditure for electrical merchandise. The savings made in per family expenditure, through lower prices, should have been used for the purchase of more appliances. Obviously, it was used for new clothes, beauty treatments, or a monthly payment on a new automobile. Obviously, price alone is not the sinecure of salvation in this business—unless we are day-dreaming about prices beyond the possibilities of machines and men. The public has always moved better under the banner of stabilized markets. It has seldom moved up on rapid declines in prices. It may be well here to consider the philosophy of one of the leaders of this industry when he said, *"That capital which overreaches for*

WHAT'S HAPPENED TO RETAIL PRICES

ELECTRICAL HOME APPLIANCES

IN THE YEAR	The Electrical Industry SOLD Quantity Home Appliances (with Lamps)	(less Lamps)	At a Total RETAIL PRICE Of (with Lamps)	(less Lamps)	Or a UNIT PRICE Of (with Lamps)	(less Lamps)	Price DECREASE Per Unit FROM 1929 (less Lamps)
1929	145,488,726	17,378,726	$1,198,898,790	$1,172,638,790	$8.24	$67.42	
1937	211,131,448	30,031,448	1,204,619,206	1,178,052,206	5.71	39.22	42%
1938	203,256,360	23,256,360	806,605,660	781,905,660	3.97	33.62	50%

Figure 1

THE CONSUMER IS KING!

RETAIL PRICES ARE DOWN

PRODUCT	1929 SALES NO. UNITS	UNIT PRICE	1938 SALES NO. UNITS	UNIT PRICE	% DECREASE
INCAN'T LAMPS (RESIDENTIAL)	128,110,000	$.00.20	180,000,000	$.00.137	33%
RADIO (All Types)	4,438,000	133.00	5,823,000	51.00	62
RANGES	152,781	166.00	250,000	145.00	13
REFRIGTRS (Domestic)	778,000	292.00	1,240,000	172.00	41
WASHERS (Electric)	956,000	113.00	1,031,353	72.00	36
FANS (Desk & Bracket)	673,000	14.00	770,950	7.00	50
CLOCKS	400,000	20.00	2,500,000	4.80	76

"MORE AND MORE GOODS FOR MORE PEOPLE AT LESS COST"

Figure 2

profits, labor which overreaches for wages, or a public which overreaches for bargains, will all destroy one another. There is no salvation for us on that road."

Wherein, then, we may logically ask, is the answer? Undoubtedly, there is no simple formula and, again, none of us would care to offer any single tonic as a panacea for our ills. My own hunch is that there is nothing very deep, dark or mysterious indicated, and I make bold to suggest the answer may lie in nothing more profound than a better, more intelligent utilization of the tools with which we are already familiar, but which may have been discarded long before they have outworn their usefulness, or before we became expert in the handling of them. Too often, when we decry the public's lack of appreciation of the industry's great contributions, I wonder if the trouble does not basically lie with us—the present generation of electrical men—who may have wearied too soon in the story and its telling. You remember the old simile that, "A man is young if a lady can make him happy or unhappy; that he has entered middle age when she can make him happy, but can no longer make him unhappy; and that he is old and gone when she can no longer make him either happy or unhappy." I don't know which of these stages we may be in, but sometimes it seems to me that we may have grown tired—or too anxious—to try new themes before the old ones have caught on, if only to entertain our own lagging enthusiasms. More likely, however, we have unconsciously assumed that the job of romancing electricity has been accomplished and that the powerful story of an $89.50 washer for $49.50 has become the acme and zenith of good merchandising and headlines.

May I review, ever so briefly, some of these old tools that may have lost their edge through disuse and suggest the possibility of again cleaning and oiling them and putting them to work until their usefulness really has been exhausted?

First and foremost, advertising and public relations. I combine these two because good advertising can well win good public relations as it sells merchandise, while the winning of good public relations must utilize advertising as its running mate. My comments here will be purely academic. I long ago learned that we are all advertising experts in our own right and can glibly discuss surveys, buying motives, trends, tendencies, markets, media, hormones, and psychological subtleties. I wish to suggest that, if the public doesn't appreciate us as much as we would wish, then we might look to our advertising and possibly condemn it, in part, for failing in its real mission of winning good will toward electrical living. Heaven knows, we spend in total enough to do the job. Millions of dollars, each year, are poured into white space. Too small a percentage of this huge total is utilized today in describing the *benefits* derived from our products. Too much of it assumes price is the only intriguing headline. There must be a better compromise or half-way point. Any current review of electrical advertising, clipped miscellaneously from newspapers and magazines, will demonstrate the point. The assumption must be that the job of romancing electricity and its usefulness has been accomplished. The assumption must be that there are not millions of children constantly growing up to adulthood—hundreds of thousands of new brides each year who still can, and should, be influenced by reminder copy of the type employed when the industry was somewhat younger. To be specific, assume we let the fashion and style expert of a large metropolitan store write a clothes washer advertisement. What would she do? Her advertisement would, of course, show a washing machine, but beside it she would probably place a stunning matron in a streamlined gown, and the headline would read—

40 years old—
and still a straight back,

and the copy would then continue—"youth, beauty, added hours of freedom—your bonus with a blank Electric Washer, etc., etc."

Naturally, she would mention a few features and the price, but she wouldn't stop at price alone, nor would she prattle about 57 features any more than she'd describe the beautiful gown with a headline—"Made to wear 3 years, 5 months, 18 days," and then go on to say it was made of 1875 non-tarnish ¼ inch sequins, that 15½ yards of fine sewing silk were used in its construction, with a 15 inch black plastic automatic slide-fastener. She knows women too well. She lets them picture themselves looking like the model. She tells them that it's the thing today—she makes them cry for lack or want of it.

Now, I'm not being naive enough to suggest institutional copy in point-of-sale advertising. I am humbly suggesting, only, that possibly 15 per cent of our total advertising dollar can still be skillfully employed by good copy writers, in setting up powerful reminders of the dramatic and romantic benefits of electrical living; and I am not convinced that such advertising, properly done, should be sneered at as institutional copy—for a failure to do a selling job. I still believe advertising of a specific product, or of a general nature, can be writ-

WHAT'S HAPPENED TO THE PER CAPITA FAMILY INVESTMENT IN ELECTRICAL HOME APPLIANCES

IN THE YEAR	NUMBER AMERICAN FAMILIES WIRED HOMES	BOUGHT (NO. PRODUCTS) PER FAMILY INCLG LAMPS	BOUGHT (NO. PRODUCTS) PER FAMILY LESS LAMPS	AT AN INVESTMENT PER FAMILY OF INCLG LAMPS	AT AN INVESTMENT PER FAMILY OF LESS LAMPS
1929	20,000,000	7.3	.86	$59.94	$58.63
1937	22,900,000	9.2	1.3	52.60	51.44
1938	23,400,000	8.7	.99	34.47	33.41

Figure 3

RESIDENTIAL SERVICE

YEAR	KW. HR. PER CUSTOMER	AVERAGE ANNUAL BILL	REVENUE PER KW. HR.	APPLIANCE INVESTMENT PER FAMILY (LESS LAMPS)
1929	499	$31.44	6.30¢	$58.63
1930	543	32.58	6.00	
1931	578	33.18	5.74	
1932	597	33.25	5.57	
1933	595	32.67	5.49	
1934	624	33.07	5.30	
1935	672	33.53	4.99	
1936	727	33.81	4.65	
1937	793	34.81	4.39	51.44
1938	845	35.57	4.21	33.41

Figure 4

ten with sufficient heart-throb to constitute good selling copy. And to be practical and specific again, certainly the public relations job can be accomplished without going ponderous and heavy, and that advertising—dedicated to the public relations job—can just as well sell as it tells.

Occasionally, we all run across some of the old advertisements written some ten to twenty years ago. Unblushingly, they tell the story of drudgery banished by white magic, of happy brides, of pains and aches and wrinkles giving way to youth and charm. Hard-boiled as we are, we must still be thrilled anew in their reading—like seeing an old friend. But, of more importance, let's at least, not feel that the thrill and the use of the message can ever be out-moded in its appeal to every generation.

Whether or not we all agree that there may be some element of truth in this philosophy for our advertising, we can at any rate accept the theme that constant study of, and improvement in, our advertising and our public relations responsibility, is desirable.

Secondly, I would suggest we take a look at another old, but little exploited tool, namely, the home building market.

Something over 1000 new homes per day will dot the American landscape in 1939—1000 new show rooms—1000 points of comprehension—1000 new evangelists — 1000 new opportunities every day—made available as a spectacular vehicle for promotion. Every one of these 1000 families per day are starting upon a new and exciting adventure. They *want* the type of living we alone can give them. *We* want the builders of these homes as additional merchandisers for our products and services. To jump well into the clouds for a moment, we could raise our sights in contemplation that the anticipated 400,000 new homes in 1939 could well use $1,000 per home in terms of electrical merchandise and 4000 khwr per year in load, or a market alone for $400,000,000 in equipment and 1,600,000,000 kwhr in load.

The home building market could readily be employed as our major promotional tool, as exciting examples or models for the old home to emulate, with a very minimum of organized planning and attack. I have wondered for years why we have not, in our joint industry ventures, targeted the *complete* electric home as a focal point for our entire story. Why haven't we wrapped up the Adequate Wiring Program, the Modern Kitchen Bureau, Better Light-Better Sight—and our other fine promotions under the canopy of the complete home package as the crowning symbol and representation of *complete* electrical living? After all, it would simplify our message to the public—it would be less confusing, if we tied up immediately the loose strings of partial electrical living, with each section of our industry continuing with their individual promotions but gaining, in direct relation, something from the others. For it is the complete home—designed and built for modern living—which still pulls at the heart-strings of America. The longing of countless thousands of people for something better than shelter should give us our cue for action. That industry which first places its cooperative strength behind home building—the brightest spot on our business horizon—will win the undying affection and gratitude and good will of millions of people.

The next tool we might dust off and really utilize, I will call—for want of a better term—"ensemble selling." I recall the first meeting, here in Chicago some ten years ago; at which a group of manufacturers committed themselves to undertake the sponsorship of a cooperative kitchen movement. Our chief admission at that time was that one product could well help sell another—that our combined strength was greater than the separate units. The gradual evolution from that time has been unusually successful. Hundreds of magazines and newspapers have spread the story of the electric kitchen—the average American housewife knows that something has happened in the kitchen. Thousands of them today are the proud possessors of completely electrified laboratories of efficiency in place of dismal workshops of drudgery, with countless thousands more hoping and praying for similar evolutions in their own homes, as the splendid work of the Modern Kitchen Bureau, under Mr. Whitwell's capable direction, has carried on. The same theme can be employed to the laundry, to table cookery, to many phases of home electrification, for we are trading on the simple psychology already etched on the consciousness of the American Housewife, who wouldn't think of purchasing a blue dress without matching it with a blue hat and accessories, or who wants a living room to be a satisfying ensemble of furniture, drapes and color. But here again, we have only scratched the surface. We must employ the theme in much more aggressive fashion, through better display, better advertising, better finance plans and better salesmanship.

Are we who know the kilowatt hour story so well aware of how little it is still understood by the public who buys it? With housekeeping the biggest industry we have, spending 30 billions of dollars a year, does Mrs. Housewife

THE NEW HOUSE...OUR OPPORTUNITY

COST COMPARISON CHART

	STRIPPED HOUSE	EQUIPPED HOUSE	DIFFERENCE
REFRIGERATOR	$ 0.00	$ 150.00	$ 150.00
RANGE	0.00	110.00	110.00
SINK	25.00	300.00	275.00
CLOCK	0.00	5.00	5.00
VENT. FAN	0.00	30.00	30.00
HEATING	200.00	300.00	100.00
WIRING	75.00	125.00	50.00
AIR CIRCULATOR	0.00	50.00	50.00
WATER HEATER	0.00	94.00	94.00
TOTAL	$ 300.00	$ 1164.00	$ 864.00
SELLING PRICE OF HOUSE	$ 7500.00	$ 8364.00	864.00
MORTGAGE	6000.00	6691.00	691.00
DOWN PAYMENT (20%)	1500.00	1673.00	173.00
MONTHLY PAYMT (20 yrs)	42.06	46.89	$ 4.83

Figure 5

YEARLY K.W.HR. CONSUMPTION

HOME WITH 7 ROOMS, GARAGE FAMILY OF FOUR WITH MAID

COST $10,000.00

LIGHTING	1,512	
AIR CONDITIONING (Winter)	1,520	
AIR CONDITIONING (Summer)	2,000	
HOT WATER HEATER	4,000	
KITCHEN	1,881	KITCHEN INCLUDES: Range 1200, Dishwasher 60, Ventilating Fan 21, Refrigerator 258, Disposall 25, Clock 18
LAUNDRY	372	LAUNDRY INCLUDES: Clothes Washer 18, Hand Iron 57, Laundry Clock 18, Portable Ironer 278, Ventilating Fan 7
MISCELLANEOUS (Small Appliances)	605	
TOTAL	11,890 KW.HR.	

Figure 6

fully appreciate that her electrical dollar is the only quantity bargain she purchases? When she buys 5 lbs. of meat, she pays five times the price per pound. When she buys three pairs of hose, she pays three times the price per pair. But when she buys quantities of your commodity, she gets a constantly decreasing price per unit—a quantity discount—which she achieves for no other dollar of her budget expenditure. She may be dimly aware of the formula—but I doubt very much if she ever makes the commodity comparison suggested to the extent that impels her, every month, as she looks at her electric bill, to bless the good electrical industry.

Progress could be so accelerated in this direction if all 12 monthly bills carried sales messages, so often considered by you, similar to the following, for a small customer using, let us say, 50 kwhr @ 4c. "You have used these 50 kwhr of work to make light, to make heat and to make power. This work is equal to the muscle work that one man could do in 650 hours. If you paid the man 25c an hour, that would cost you $162. But all this work, done by electricity, costs you only $2 or less than 1/3 of 1c for each man-hour; 650 man-hours equal three men working in 8 hour shifts for 27 days. Where else do you get so much "help"—so many services—for 30 days, as electricity gives you for only $2?" I haven't yet heard an awfully good reason for not utilizing more definitely this often suggested and very simple method for making people appreciate electricity twelve times a year, at least, and thus encouraging the progressive step-by-step purchase contemplated through ensemble selling.

I would be derelict in this discussion if I failed to suggest the fine job so many of you have done and are currently doing in so-called "dealer cooperation." The appliance dealer needs the leadership which only you in your community can give him. As a small operator, his horizon may be closer than yours is to you, but it still has 360 degrees and many obstacles. He can be made a vital factor in a mass sales attack just as easily as he can become discouraged and frustrated by mass inactivity and lack of organization. You need him for exposure and mass contact. He needs the stimulation you can give him through your trained personnel, coordinated advertising methods, marketing knowledge, ready access to customers' homes and overall leadership. You can help him build character and personality into his business; you can make him stand for something; you can make him loyal to something. He will never supplant you in your responsibilities. He can only aid and abet your objectives, as has been evidenced wherever sympathetic cooperation has been extended. You and manufacturers, jointly, have the constant responsibility of building these better merchants, if the American Housewife is to some day say "My electrical store" just as she now says "my doctor," "my dentist," "my grocer," "my butcher," and "my druggist."

I have been trying to indicate that, although this still young business of ours has gone a long way, although we can be justly proud of our accomplishments to date, we still have a never ending road to traverse—a road beset with ever-new dragons and hobgoblins; a road, the winning of which, will continue to require new courage, new vision and intelligence of a high order. As long as we preserve the ability to laugh at ourselves a bit, as long as we cherish the shred of a sense of humor, as long as we continue to emerge from harassing circumstances to the extent experienced by the Electric Service Companies of America, we need have no fears or concern over any factor, other than the speed of our progress. You have won the admiration of industry and the public at large by your example of forbearance, your patience and your constructively militant stand in the face of great discouragements. Manufacturers and distribution generally, in this industry, have received the same measure of stimulation which must be yours over some of your recent victories, but realize, with you, that these gains have come, not so much at the whim of, or with the good wishes of your principal protagonists, as they have because of a sensing of the keen edge of an aroused public opinion—the only throne before which the political crusader ever bows. I have tried to suggest that some portion of our advertising be utilized in the better use of white space in encouraging and building better public relations, even as it sells merchandise. The two purposes are not incompatible—they are handmaids—and should not be misconstrued with institutional copy which some critic has said probably received its name through being written by people in institutions!

Along with advertising and public relations, I have referred only casually to the home building market, ensemble selling, and the mass effect of coverage and exposure through the continued development of the intelligent cooperation of thousands upon thousands of retail merchants. You can add to the list a dozen other tools that occur to you as calling for repolishing and re-dedication. The emphasis on better planned and systematic sales-training, rural-electrification and its opportunities, the constant guard over the mechanics of good expense con-

trol which can save us all more money than another ½ of 1 per cent in discounts; watchfulness and concern over inventories, the abuse of which strikes at the very base of much of our market demoralization, fewer models in our product lines, are just a few of the basic factors in our organization planning that would pay dividends and provide the additional funds necessary to more actively carry on with our essential promotions. Finally, emphasis must be placed on the continual finding and the hiring of the best young talent available in the market, with constant encouragement to such talent not to accept in total the formulas we have created, but to use its imagination, to be militantly curious, enthusiastic and energetic in finding and pursuing quicker roads to an ever-improving electrical standard of living. For, after all, we are dealing so largely with the human equation—the man who makes electricity, the man who distributes or sells it with the appliances that consume it, and the man who uses its overall blessing. While millions of our people are now using electricity *partially*, thousands upon thousands of American families, at least, are already well on the road to *complete* electrical living. Our objective is to make sure that they never quite catch up with us. As soon as the last down-payment is made on the dishwasher, the new electric range, Mrs. America must wake up and learn that she can dispose of garbage electrically, and when she goes to sleep at night, she must discover that a light, comfortable electric blanket can bring about a degree of comfort never before experienced—another "off peak" load opportunity! New products—new uses—continually.

Yes, electricity now travels around the clock more than ever before, and, with the miracle of television on our threshold, with electric wires in concrete, keeping the snow and ice on sidewalks melted as soon as it falls, with automatic concealed cameras taking the picture of the kidnaper for identification as he leans over the bed of the sleeping child, we can't be very much surprised at the gentleman on Long Island who ordered that a brook be directed through his estate and specified that the brook should make the noises of his childhood. He wanted it to either swish, murmur, or gurgle, and we are reliably informed that this gentleman can now sit in his pleasant library on a spring morning and, by pushing one of three buttons, at his option make his darn old brook either swish, murmur or gurgle. No matter where we raise our sights on the electrical horizon—new and distant horizons will always appear.

So, apparently there is a new electrical standard of living every day. We are dealing with a non-static force or term. What a business this is—that we need never grow stale or permit ourselves the ennui of boredom. Countless thousands of American people consciously, or unconsciously, want the benefits of electrical living. With grandmothers flying to Bermuda; with mothers as charming and youthful at forty as their daughters at twenty; with comfort, light and relax-

(*Continued on page* 142)

A section of the sales conference luncheon, attended by 260 sales executives

Selling the Home Market of Tomorrow

By J. W. Follin

Chief, Federal Home Building Service Section, Federal Home Loan Bank Board

An address before the Sixth Annual Sales Conference, Edison Electric Institute, Chicago, March 21-24

OBVIOUSLY, before you can plan to sell the home market of tomorrow, you must determine as clearly as possible what the home market of tomorrow will be. An analysis of the probable market should point out the best ways to sell it.

I venture the opinion that the home market of tomorrow will be:

1. An expanded market.
2. A lower priced market.
3. A built-to-order market.
4. A quality market.

Let us analyze each of these items.

An Expanding Home Market Immediately in Prospect

Leading economists, building industry executives and financial experts all agree that 1939 will see a marked increase in building activity. Some predict an increase exceeding 20 per cent over the five billion dollars expended for all construction activities during 1938, bringing the total for 1939 to well over six billion dollars. The greatest percentage increase is predicted for non-farm residential building. The estimate for the past year is given at $1,285,000,000, while the expected aggregate for 1939 is $1,671,000,000, more than a 30 per cent advance. The record to date more than substantiates this estimate. Contracts awarded for residential construction during January and February in 1939 were more than double the volume for the same period in 1938.

Translating the present residential building into terms of completed units, about 350,000 family units were provided through new construction in 1938. This compares with 293,000 units in 1937 and the low point of 54,000 units in 1933. It is significant that during the seven years from 1931 to 1937 an annual average of only 160,000 units were provided. Thus construction fell short of satisfying the new housing required by population increase without taking into account destruction of housing through fire, hurricane or tornadoes, or that which was removed to make way for new construction.

There seems to be general agreement on the fact that the country is today

MR. FOLLIN

short on housing to the extent of anywhere from 750,000 to 1,500,000 family units. The shortage is more marked in some localities than in others, and the particular shortage with which the utility executive would be concerned is the shortage in his own locality or area. Each situation requires special analysis. I refer briefly to one locality—Philadelphia. A recent analysis by the Philadelphia Housing Association discloses these pertinent facts:

On a conservative basis from 5,000 to 6,000 new family units are required in Philadelphia each year to keep pace with the housing need. In 1930 the net increase was only 1180 and in 1931 only 327. During the four consecutive years, 1932-1935 demolition exceeded new constructitn and there was an actual loss of 2,094 family units, without considering the theoretical loss of yearly need of 5,000 to 6,000 new units. In 1936 the net gain was 1,611 units but in 1937 the net gain dropped to 349. In 1938 building permits comprised 1,978 units, whereas 1,504 houses were torn down including 1,890 family units.

The record of the past nine years contrasts sharply with residential building experience prior to 1930. New family units built during 10 year periods were as follows:

1900 to 1910.....	6,718 average per year
1910 to 1920.....	6,783 average per year
1920 to 1930.....	9,036 average per year
1930 through 1938 .	1,264 average per year

These figures are even more convincing when considered with other factors. In 1934 there was a 15.5 per cent vacancy in houses for rent in the city and in 1939 there was only 3.4 per cent vacancy. The true vacancy, however, is as low as 2½ per cent if houses obviously unfit for occupancy are deducted. Normal vacancy in Philadelphia is usually considered to be 5 per cent. On that basis an existing shortage of 40,000 family units is computed.

Comparative figures show that during the first six months of 1938 only 6.1 family units for each 10,000 population were built in Philadelphia as compared with 14.4 units in Detroit, 35.0 units in Washington, D. C., 49.2 units in Los Angeles and 101.4 units in Miami.

From the national standpoint, housing experts estimate that an annual construction volume of 500,000 to 750,000 family units is necessary over the next ten years in order to meet current and deferred needs. This requires building activity double that of 1938. Whether such a volume will be reached in the next several years depends upon a number of considerations which cannot be determined today with any reasonable certainty. There are both favorable and unfavorable factors affecting the home market of tomorrow.

The most favorable factor is the availability of adequate funds for financing on terms unusually attractive to the home owner. Whereas home financing institutions generally were frozen some five or six years ago, today the money marts are bulging with funds seeking investment in home mortgages. This situation has not just happened but is the result of specific measures designed

to correct the situation. The first was the establishment of the Federal Home Loan Bank System in 1932, a credit reserve system, generally similar to the Federal Reserve System, through which 12 Regional Banks extend credit to home financing institutions in about the same way that the 12 Federal Reserve Banks extend credit to commercial banks. This system has grown until it now comprises over 4,000 thrift and home financing institutions, known generally as savings or building and loan associations. They have combined assets of over $4,500,000,000 and a credit line with the 12 Regional Banks of about $1,500,000,000. Members of the Federal Home Loan Bank System are currently doing about 50 per cent of the institutional home mortgage financing in the United States. A distinctive feature of this Bank System available to all members and in use by more than half of them, is the insurance of savings up to $5,000 in any single account by the Federal Savings and Loan Insurance Corporation, a government corporation parallel in its operations to FDIC and operating from premiums paid by the insured institutions.

Of the greatest significance in straightening out the tangled home financing situation of the early '30's and of stopping the downward spiral of real estate values, was the Home Owners' Loan Corporation which is managed by the Federal Home Loan Bank Board, the same agency which supervises the Federal Home Loan Bank System. This Corporation refinanced over one million distressed home owners, granting them long term amortized loans at 5 per cent interest which usually replaced short term or miscellaneous types of mortgages. In this process the Corporation baled out countless numbers of home financing agencies and thereby provided them with funds to resume mortgage lending operations.

Of great importance, also, has been the operations of the Federal Housing Administration through its insurance of mortgages under Title II. This insurance helped bring mortgage money out of hiding for new construction, and also it has been one means of establishing favorable financing for the new home owner. Similar to the HOLC, its operations have been based on long term amortized loans at 5 per cent interest rate plus the premium for insurance. Recently, a number of financing institutions, notably in New York City, have announced the availability of mortgage money on selected properties, at rates below 5 per cent. There would seem to be little reason to question the sufficiency of mortgage financing over a considerable number of years in the future, to support an increased home building volume necessary to meet current and deferred needs.

There are other considerations, however, which may influence the demand for new housing, and thereby automatically encourage or restrict production. The important questions are the following:

1. Whether general economic conditions will affect stability of employment and willingness on the part of the prospective home owner to undertake a long term commitment.

2. Whether houses will be produced at sufficiently low sale price to meet the volume market, that is, serve the greatest number of low income families.

3. Whether building costs can be stabilized to prevent undue increases in land, labor or materials increasing prices beyond ability to pay.

4. Whether jerry-building practices can be eliminated which wrecked the preceding building era, dislocated home financing practices and had a serious effect upon general economic welfare. Repetition of these practices surely would slow down new construction and quite conceivably necessitate strenuous measures limiting the freedom of private enterprise.

5. Whether confidence in home ownership so badly shaken during the years of stress can be completely restored, through establishing standards of value and means of identifying a sound product.

Of this latter subject, I shall speak more at length subsequently. First let us consider the limitations as to price.

A Low Priced Home Market Is Necessary

A report by the National Resources Committee on "Consumer Incomes in the United States" provides much fruitful thought for study. It gives a picture of unusual clarity of the American family's income. From this it can readily be seen that the housing industry, as it exists today, is building homes priced 'way too high for the average family. Prices must be reduced sharply if the great potential market is to be tapped.

This analysis indicates that 70 per cent of American urban families during the period from July, 1935, through June, 1938, had annual income of $2,000 or less. In fact, one-half of them received incomes of less than $1,500. Unless family income has been, or is to be perceptibly increased, the volume market is limited by what it can do for this 70 per cent with incomes less than $2,000.

Depression brought a colossal change in the U. S. housing market. In 1929 more than half the families in the country were earning $2,000 or more per year, and could afford $40 or more per month for shelter. Building met this high-priced market well and built an average of 561,000 dwelling units annually during the twenties. Today that $2,000-and-up income group has shrunk from one-half to one-quarter of the total.

Building for the 25 per cent cannot develop volume of construction anywhere nearly approaching the 750,000 family units per year deemed necessary in the next ten years. Many home merchandisers have already found this out much to their regret, and others are bound to find it out in the years to come. A case at point is the District of Columbia.

Recently an analyst of the local situation stated that there were more houses in the $8,000 to $15,000 class now offered for sale in the Washington, D. C., market than there were families with sufficient income to buy them, and building has by no means stopped in that particular price range. Everyone connected with home building much prefers to build in the higher priced brackets because all the desirable modern home improvements can be included and business is done with a selected group of clients.

On the basis of family income only one family out of every three can really afford a house costing more than $5,000. The other two-thirds must be provided with shelter costing less than $5,000. In fact, one-half of all urban families should not purchase houses costing more than $3,750. These estimates are calculated by rule-of-thumb that a family is justified in investing in a home not more than 2½ times its annual income.

The subject is clearly summarized by the Editors of the March, 1939, *Building Reporter* as follows:

"Building would do well to study this $2,000-and-under income group. Excluding those who earn less than $1,000 per year as being outside the current private enterprise market, there still remain some eight million families in the $1,000-$2,000 group. This group comprises roughly one-third of all U. S. non-farm families and is building's most stable market. The ups and downs of the higher and lower groups notwithstanding, the $1,000-$2,000 group during Prosperity, Depression and Recovery has remained at about one-third the total number. This stable group is the market for the 'low cost house,' for it can afford somewhere between $20 and $40 per month for shelter. When the 'little house' really goes to this market, Building will really go to town."

Surely when the higher priced market

is saturated, home builders necessarily must turn to the lower priced market, and hence the conclusion that the home market of tomorrow will be a low priced market.

The Home Market Will Continue to Be Largely a Built-to-Order Market

Those who are familiar chiefly with home building practices in the larger cities view the home building market as primarily a built-for-sale market. Actually, when the figures are examined for the entire country, it is evident that more than half of home building is on order, that is, erected by builders or contractors on specific contract or order from the home owner.

It is not probable that this situation will be materially changed in the home market of tomorrow although there are two factors which may alter it. The first is the possible development of larger building companies which will standardize and systematize construction practices in the expectation of reducing costs, and which because of greater volume will operate on a lower margin of profit per house. Obviously, this basis of operation presents perplexing management problems and overhead costs which might eat up capitalization if steady volume is not maintained. The second is the possible expansion of prefabrication and its acceptance by the building industry and building labor and by the buying public. At present it is difficult to draw any fixed conclusions as to this factor.

The Home Market of Tomorrow Should Be a Quality Market

I am most hopeful that the home market of tomorrow will be a quality market, as I am extremely dubious whether a volume market can be maintained except on the basis of quality. The experience of the HOLC in refinancing the loans on a million and more properties, and the reconditioning of over half of them, exposed the full extent of shoddy construction and faulty planning in the past. These unsound practices should never be forgotten; particularly the possibility of their recurrence. There are the danger signals appearing here and there that unsound practices are again creeping into some local home building programs.

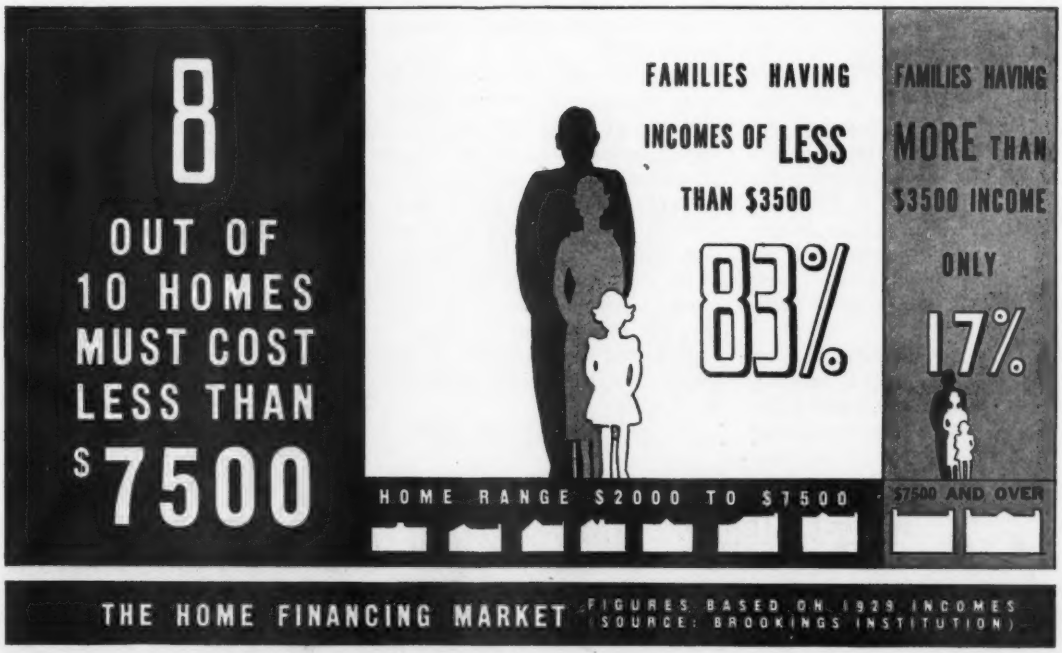
Our concern then should be with the establishment of those controls which will prevent the irresponsible and unprincipled elements from upsetting the apple cart and discrediting the greatest number who endeavor to do the right kind of a job. There are several developments of recent years which will provide these necessary controls if adequately backed and sponsored by responsible local elements.

I presume it is generally known to you that the FHA predicates its initial mortgage insurance commitment on examination of the working drawings and specifications and approval of the building site and neighborhood, that it makes at least three compliance inspections on its own behalf and predicates final acceptance for mortgage insurance on the valuation of the physical improvements and qualifications of the home owner to meet his financial obligations. FHA has issued minimum construction standards, state by state, and has encouraged the employment of architectural service in home building.

This procedure represents a big step forward but experience is showing the need for bringing the small home seeker a greater measure of expert guidance right at the start. Many houses go wrong in the planning stages. The need for skilled advice and counsel during the initial stages can hardly be overestimated.

The Federal Home Loan Bank Board as a means of improving collateral underlying the mortgage loans of lending institutions and protecting Federal funds temporarily invested in the Bank System or loaned to member institutions, has for about two years sponsored the Federal Home Building Service Plan. Its program was developed initially as a desirable service for mortgage lenders comprising the Federal Home Loan Bank System. More recently, its plan has been made available to nonmember mortgage lenders and it has solicited the cooperation of all home building and home selling agencies.

The Plan is federal, or national, in name only. Its purpose is to encourage the development of local home building facilities operated entirely by local people for local good. It is distinctly and



wholly private enterprise. Government agencies participate only to facilitate, motivate and assist local endeavor.

The distinguishing feature of this program is a special architectural design, specification and supervision service provided at low cost intended primarily to protect the home owner. The small home owners who will be served can least afford any hazard of their housing investment. Safe investment is predicated upon sound financing, economical design and good construction. Both suitability of design and control of construction require architectural and technical service. Better construction should be rewarded by the best possible mortgage terms, thereby providing an incentive for the use of technical guidance. Hence the mortgage lender is the pivotal factor as sound financing is his responsibility. Maintenance of values is all the more necessary in these days of long term and high percentage mortgage loans; for this reason the program is essentially important to the mortgage lender, but no less important to contractors and builders, lumber and material dealers, realtors and all those who offer to supply housing to the public and whose prosperity is directly dependent upon public acceptance of the product offered and the degree of satisfaction enjoyed by the purchasers of these homes.

Specifically, what is Federal Home Building Service, how does it operate, and how does the home builder obtain it? Briefly, this Plan affords the essentials of an adequate architectural advisory and construction supervisory service at a fee within the budget of the home builder of modest means. It provides all planning materials such as home designs, floor plans, working drawings and specifications as well as the all important supervision on the job whereby the owner receives maximum assurance of dollar for dollar value. Other important features include professional assistance in qualifying contractors, taking of contract bids and inspection of materials.

I will fail to make my point if I give you the impression that this is simply a design service. True, the use of a well-selected standard design when building a small house is quite reasonable. And economic too. This service offers a wide variety of attractive small home designs created by leading residential architects, but as importantly those offered for use in a particular locality are prepared or selected by local architects as appropriate to that locality.

Home Selection

In addition to the plans themselves, the service provides the home seeker with expert guidance and advice in choosing the plan that best fits family needs, financial resources, and the site and neighborhood where the home is to be built. This service provides for changing or adapting these standard designs to better suit the home seeker's requirements.

With proper organization and intelligent planning the seemingly complex process of building can be simplified greatly. This, essentially, is the aim of the Federal Home Building Service Plan. In "one package" the home seeker obtains:

1. Sound financial counsel.
2. Competent architectural guidance from the inception to the completion of the house at low cost.
3. Supervision of construction.
4. A Certificate of Registration, stating that the home has been built under the Plan —thereby strengthening investment security and resale value.

In short, the Plan affords a means whereby the lender can secure a safer mortgage investment, the owner a better home, and the dealer, contractor and realtor a more satisfied customer and a fair profit.

To secure the advantages of the service, a prospective home owner may contact any local cooperator—lumber dealer, contractor, realtor or lender. Operative builders, anticipating public demand, may build houses and offer them as products of the Plan, provided that application for Plan status is made at the inception of the project, that approved service facilities are utilized, and that the construction is subject to inspection and supervision by an approved architect or technician, independent of the builder.

The modified technical service is designed to make needed technical guidance available on moderately priced houses where technical safeguards generally have been lacking. Usually the modified service is available on houses costing $7,500 or less to build. There are, however, some communities where the maximum may be slightly above or below this figure.

The fee for the modified architectural service is lower than ever offered before for comparable services, varies in accordance with the cost of the house and also in proportion to the amount of special or original work required. Far from being an extra, competent supervision frequently saves its cost many times over.

Should the home exceed the price range in which the modified service can be had, or if you require special drawings to carry out individual ideas not expressed in the prepared designs, full architectural service is recommended and is readily available at commensurate fees.

The Federal Home Building Service Plan from necessity has been developed slowly and in selected communities. Its facilities at present do not blanket the country. Yet the essential architectural service is available through specially formed architectural groups in more than 30 cities and through individual architects in as many more smaller communities. There is now in the making a considerably expanded program of field development embodying important endorsement by the American Institute of Architects and the Producers' Council, with which your organization is affiliated. This expanded program contemplates a widespread educational and publicity program to convince the public of the greater value inherent in houses built under technical control. Similar to the promotion of any worthwhile product, public recognition and demand will accelerate establishment of local facilities. Home merchandisers will not hold back from furnishing a product which the public favors. But throughout the country it is the intention to develop these facilities with builders, contractors, lumber and material dealers and others as integral parts

(*Continued on page* 160)

Do Electric Appliances Meet Women's Expectations

By Mary Davis Gillies
Home Furnishing Editor, "McCall's Magazine"

An address before the Sixth Annual Sales Conference, Edison Electric Institute, Chicago, March 21-24

I HAVE been asked whether women are satisfied with electric appliances today.

My answer is: "No. Of course not!"

As a matter of fact, you ought to know that women are fundamentally never satisfied. It's the nature of the critter. Look at what happened in the Garden of Eden. Eve responded to the serpent because she wasn't satisfied and women haven't changed much since then.

It's woman's perennial dissatisfaction that keeps you men busy digging up new ideas and, incidentally, keeps you in business. The whole thing is slowed up by the unfortunate way women have of being dissatisfied but not knowing why. That, of course, makes it all a beautiful guessing game.

Even if you are a misogynist, and don't care whether or not women are satisfied, you'll still have to agree with me that appliances tomorrow will be very different than those we are using today. The only proof that anyone needs that change is inevitable is to look at electric appliances of a few years ago.

I can probably recall the situation farther back than most of you. Believe it or not, my experience with major electric appliances covers about 25 years. My socks and pinafores were washed in an electric washer. And back in 1920 I did some of the first testing work on electric ranges ever done in a Home Economics laboratory.

Those early appliances were tragic affairs. Ovens took 25 minutes to heat. The idea of a cold start or not preheating the oven began in those days and you can't blame the originator. With luck, top units brought a quart of water to boil in 30 minutes. So no wonder you all jumped at the idea of waterless cookery!

Washing machines had wooden tubs and unprotected roller wringers, ideal for smashing fingers.

I remember a pre-world war washing machine we had that gave you a shock every time you touched it. Our laundress wouldn't go near the thing unless mother was right there beside her.

MRS. GILLIES

Then there were the irons, heavy as lead weights, and toasters which burned more bread than they toasted!

Change? Why, today's handsome appliances aren't even related to the horse-and-buggy appliances of 20 years ago. Believe it or not, I frequently hold appliance manufacturers up as models to furniture manufacturers, rug manufacturers and piano manufacturers. Why? Because appliances today offer such an excellent welding of design and efficiency. But talk to women up and down the country the way we on *McCall's Magazine* do and you will realize that the ideal in appliances and their application to the home has not yet been reached.

We Talk To Women

Of course, *McCall's Magazine* has a testing laboratory, directed as many of you know, by Kathleen Robertson. There new appliances are put through their paces. However, we are not content with a laboratory point of view. We want to know what reactions the average woman has to her appliances. What success she has with them and what her difficulties are. So, with your cooperation, for the last four years we have been making home calls in the company of your own Home Service girls.

Our travel scout, Lucy Goldthwaite, under Miss Robertson's direction, has interviewed women in and around Washington, D. C., Salt Lake City, Memphis, Los Angeles, Kansas City and many other towns and cities.

Revealed in her reports on home calls are the weaknesses of the appliances themselves and of the merchandising technique of the industry today.

What are some of these recurring difficulties? Difficulties which turn up in St. Louis, Boston, Portland and Memphis. Which turn up wherever electrical appliances are sold and used.

Well, here are a few situations which are causing complications today:

1. Overselling.
2. Inadequate labeling.
3. Inadequate instructions — written and verbal.
4. Inadequate installation and wiring.
5. Inadequate storage.
6. Difficulty in cleaning.
7. Complicated adjustments and too much technical knowledge needed for operation.
8. Too much gadgetry.

I really feel apologetic about making my first complaint against salesmen because, poor dears, they are always being kicked around. I do it only because I feel that the responsibility for their sales talk should be divided equally between the manufacturer and the retail sales manager .

For instance, somewhere salesmen seem to have gotten the idea that electric ranges will cook a meal without any assistance at all. Now you and I know that this isn't true. But when a woman hears *that* she expects miraculous results. She expects beautiful

light feathery biscuits, even if she forgets to put in the baking powder!

Instead of presenting electric ranges as patent cure-alls for poor cookery, it would be much wiser to present the range as a perfect cooking medium without the magic hullabaloo. There would be fewer complaints in the end.

If all salesmen had to use every appliance he is asked to sell, false claims made on the selling floor might be stopped. I know this practice is followed in many utilities and it is a practice that should be adopted by all the utilities and dealers. Only then will legitimate points be brought out on the sales floor. In one territory where this was actually tried on roasters, there were practically no trouble calls and the whole community was enthusiastic about roasters.

Incidentally, when receiving his instructions on the use of the range, the salesman should also be instructed on the subject of the right pots and pans. In a staggering number of cases in these reports the entire difficulty in the range performance can be laid to the use of the wrong type of pots and pans and not to the appliance. For instance, time after time the old deep black japanned bread pans are used for baking biscuits with the well-known result.

Miss Goldthwaite says that in nine cases out of ten, if the oven has been properly regulated, trouble calls on ranges result first from crowding the pans into the oven too tightly and second by the use of the wrong kind of pans.

To my mind, one time and place to bring out these facts is on the sales floor, right after the sale has been completed, and not after the range has gotten into the kitchen and several batches of cake and pie have been spoiled with the resultant resentment toward the range.

Make Her Read Instructions

Complaints could be further reduced and a feeling of greater satisfaction developed through the simple device of better and more complete labeling.

A new range, refrigerator, washer or ironer is moved into the house. Even if it replaces an old one, this particular appliance will be a new and foreign affair to the average family. Every little part should have a tag or label bearing some such legend as: "This is the broiler; for use place it on the third slot down in the oven so that top of food is about 2 in. from heat or top oven unit." Or, "This top unit has five heats. Turn knob to 1 for high heat—use to boil water; turn knob to 2 for deep fat frying; turn knob to 3 to main-main rolling boil; knob at 4 maintains simmer; 5 keeps food warm." "This is the well cooker. When using turn switch to high till steam issues freely, then turn to low."

A second warning about pans for both surface and oven cookery could very well be included on these individual labels.

Undoubtedly all of these instructions *are* in a booklet, but countless times the instruction books are not so much as opened. The home calls made by the magazine I represent prove this. If every part of the appliance had a tag or label on it which had to be removed before use, the chances are the labels would be read and we hope better understanding achieved.

Of course, instructions, verbal or written, should be accurate and simple. I mention this because, though obvious, it is not always the case now.

To draw on my own experience: A few months ago I bought an electric juice extractor. The only instructions were on a tag. It read, "Oil occasionally."

It didn't say how often.

It didn't say where.

It didn't say what kind of oil.

Having an expert at hand, I asked Miss Robertson about the oil and she advocated a graphite lubricant that wouldn't rust. After careful examination I found some holes and I plugged oil in all of them.

But even though I am constantly exposed to electrical appliances, and in days of yore I used to teach a college class in Household Management and the use of electric appliances—

I still would like to have been told the kind of oil to use.

I would like to have had a diagram showing where the business should be oiled.

I would like to know whether "occasionally" means it should be oiled once a week, once a month or twice a year.

All this just goes to show how much we women need your sympathetic help and detailed advice. Of course, a juice extractor means very little to you, in terms of current consumption, but it means a lot to you in terms of the customer's good-will toward electrical appliances in general.

Instruction books on major appliances are equally faulty. We have been shocked and amazed by the number of Home Service girls who have declared that the manufacturers' instruction booklets were not usable. Of course, this entails the preparation of special material by the Home Service Department to take care of the omissions. And not every Home Service Department is equipped to do an adequate job on such material.

Five heads of Home Service Departments we have worked with in the last year have said:

Manufacturers' instruction books are not accurate as to formation of recipes and

Second, they are not accurate or consistant on temperatures and times for baking and roasting

Third, they maintain that in many cases the material seems to be organized from a salesman's and engineer's point of view, rather than from a housewife's point of view.

I have discussed this problem with Miss Robertson, who has the combined point of view of the field and laboratory, and she agrees with the girls. Furthermore, she feels that much of the present confusion on electric cookery could be eliminated if range manufacturers could agree

1—On methods of cookery
2—On cooking times
3—On baking and roasting temperatures.

After these methods have been agreed upon Miss Robertson feels the whole industry should adhere to them.

As a matter of fact, wouldn't it be a good idea for the industry to develop washable charts giving standard proportions, cooking times and temperatures for both top and oven cooking for free distribution? They should be hung on the wall. If they are not up on the wall in the kitchen when the home Service girl called, she should supervise the hanging of the chart herself.

These charts would help establish the idea that cooking is an exact science, that only through use of the right ingredients, in the right proportions, in the right pans, with the right amount of heat, for the right amount of time, can perfect results be obtained. This is true regardless of fuel used. Slapstick stage methods may get attention at demonstrations because of their entertainment value, but they are trouble builders, because they establish a false idea. Electric ranges have many sound virtues. You do not have to resort to tricks in order to establish their value.

Hit-and-miss methods of using other electric appliances cause difficulty also.

For instance, the lack of information concerning the use of refrigerators is surprising when you consider the length of time they have been in use. Repeated-

ly *McCall's Magazine* investigators have found that the only instruction the customer receives on the use of her refrigerator is from the man who sells the refrigerator or from the service men who install it. And that information, as you can well imagine, is superficial in the extreme.

Complaints seem to be centered around:

1. Forgetting to oil the motor of those refrigerators whose motors need oiling.
2. Improper functioning because of position in unheated porch.
3. Misconceptions concerning defrosting.
4. Overcrowding containers and not covering food.

Top Shelf Appliances

Thus far I have scarcely mentioned small appliances. They, too, are a source of dissatisfaction both to you and to the housewife. Here again the most serious problem is not with the appliance itself but with its application to the home. And usually that difficulty can be narrowed down to inadequate wiring.

True, the big-wigs of the industry have recognized this problem and have set up a clearing office for ideas and promotions under the title of The Adequate Wiring Bureau. This far, I understand, they have been most successful in establishing their wiring standards in new houses. But you and I know that there are millions of old houses to every thousand new houses built, and it is these old houses that are giving trouble today.

Everywhere Miss Goldthwaite goes, investigating for *McCall's,* Home Service girls report difficulty in the use of appliances caused by inadequate wiring.

Service men all over the country tell us that trouble calls could be cut 1/3 if laundries had satisfactory appliance outlets for washers and ironers. Now an overhead lamp socket is the favorite connection.

When it comes to discussing some of the elaborate amateur wiring projects involved with roasters, words almost fail me. One little job in upper New York state comes to mind. The roaster was properly installed on its own stand in the kitchen. But the only outlet in the kitchen was a make-shift arrangement of extension cords that terminated in a single outlet *two rooms* away.

It would be equally discouraging to give facts and figures on the number of mixers that have to be strung up to double sockets at the end of hanging lamp cords.

It's an old, old saying that you can lead a horse to water but you can't make him drink. And you can, oddly enough, sell a woman electric appliances, but you can't make her use them properly—or even *use* them. They *will* buy small appliances even though they have no satisfactory place to connect them. However, the appliances end up out of use on an inaccessible top shelf.

Out of Sight, Out of Mind

And that brings us to the storage problem, which is related to the wiring problem. If there is no convenience outlet where the appliance is to be used, and if there is no counter or table on which to stand the appliance, it will be tucked away somewhere, and once tucked away it will seldom be used.

Take roasters, for instance. We have found that favorite places for storing them are:

1. On top of refrigerators.
2. On the sideboard in the dining room.
3. Underneath the sink.
4. On the lowest or highest shelf in a kitchen cupboard.
5. And, most popular place of all, the sun porch without an outlet.

One alert utility has solved this distressing problem in an interesting way. Having made a thorough study of roasters and their use, this utility found that the only way to keep roasters in use was to insist that a table be sold with the roaster. In fact, they refuse to finance roasters without a table.

In solving storage problems the tendency is to make the solutions too elaborate and too expensive. My suggestion to you is, first: Line up a local carpenter or two who, with a few lengths of board, can put up shelves for next to nothing. Second: Run a continuous campaign on the importance of more convenience outlets. Third: Cajole contractors into reducing the price per outlet.

Then, when a roaster or mixer is sold, see that the poor dear who gets it has a place to put it, even if the place has to be nailed together by the carpenter. And see that there is an outlet right beside it. Do this if you want to have appliances used as well as purchased.

The final points on my list seem to deal with complications in design of appliances, and the gadgets dear to the hearts of designers.

Simple details, such as making the tops of ranges marbelized black instead of shiny white, would keep them looking better longer because they wouldn't be so likely to show stains and scratches, or, for that matter, dirt. Ridges and modeling, added for the sake of subtle shadows, make large surfaces such as refrigerator fronts difficult to keep clean. Miss Goldthwaite says the Home Service girls everywhere also complain bitterly of trouble with dirty surface units. To a certain extent some of this may be laid to difficulty in lifting and replacing surface units—a design problem. Ovens today, because of embossed rack glides and improved broiler pan construction, are easier to keep clean than the ovens of only a few years ago.

These girls also deplore too many useless gadgets. Take refrigerator dishes, which today seem to be an essential part of refrigerator merchandising. Granted that this is so, why cannot we have simple practical shapes of light-weight materials—and *can't* we have water bottles that are water bottles, not flower holders? In other words, I wish that designers would approach their problems from a practical rather than a streamlined point of view.

There is too much tailspin in the designs. Not enough plain, normal flying.

A Glance At Tomorrow

On designs of tomorrow, specifically speaking, who knows what they will be? If I had the answers I wouldn't talk without a contract.

However, I do feel that the electrical appliance industry should keep a hawk's eye on new building developments. Taken from every aspect, important developments can be expected in the building industry during the next ten years. Population studies with their interesting peak of post-war babies, now reaching a marriageable age—building material developments, government housing and subsidized housing projects all point to this.

Without question, electrical appliances, especially major appliances, will and are playing an important role in controlled housing projects. More and more builders are looking at ranges and refrigerators as standard equipment just like bath tubs and wash basins. Washing machines are not yet viewed in this light but with new designs imminent it is possible that washing machines will also be hooked up in a more or less permanent fashion to the house.

The trend, then, is toward more or less permanently installed or built-in devices for ranges, refrigerators and washers. Arrangements which make them more or less integral parts of a house. The industry should consider this trend carefully. My feeling is that this situa-

tion carried very far will lead to many headaches. It will delay the rate of obsolescence and replacements. Take dish washers, for instance. Long before they were perfected, they were installed as an integral part of the counters and cabinets. Many of these old dishwashers are no longer in use, but they have not been replaced; they are simple filling up needed space. If they were replaced because of new designs, plumbing changes would have to be made, the present counter would not serve and the new front would not match the rest of the cabinets. This is not a stray example.

Even though, in the interest of that false idol, streamlining, engineers are tempted to drop surface cooking units into counter tops and build washing machines into counters, I for one would go easy.

For Those Who Forget

I realize that I have made no new contributions. I realize also that you are more familiar with all of the problems I have outlined than I am. Occasionally, however, a truth party is worth while. A truth party where someone else tells you about yourself, so, I'll repeat again the points I have made:

1. Don't double your trouble calls by overselling.
2. Label so that she who runs may read.
3. Get together on cookery methods and be accurate.
4. Remember that adequate wiring and appliance use go hand in hand.
5. Bring appliances out into the open where they can be used.
6. Make 'em easy to clean—simple to understand.
7. Forget gadgets and poppycock selling stories if you want to avoid trouble later.

Now, I have had my say and a woman never had a better opportunity. And I hope every one of you is imbued with the idea of developing better correlation of electric appliances to the homes in your locality. At the present time that is the best way of creating greater satisfaction and, incidentally, it is also the best way of increasing current consumption.

Selling the Home Market of Tomorrow

(*Continued from page* 156)

of local set-ups. Full-fledged organizations of this type are operating successfully in Memphis, Buffalo, Los Angeles, New Orleans and other places.

The sales feature of distinctive value is the Certificate of Registration issued to the home owner if the house meets the requirements of the program. It recites the protective procedures employed in the construction and the first signature required is that of the approved architectural supervisor of construction. The Certificate is registered by the Federal Home Loan Bank Board thereby giving it a national sponsorship. It is not a guarantee of construction, but an identification or label through which the public can recognize the protection which the Plan offers.

Structure and Equipment Must Suit Changed Conditions

Obviously, those who intend to sell the home market of tomorrow either materials or equipment or services of various sorts, must picture correctly the anticipated average home and attempt to fit their products into this ensemble. It will not do at all to figure on the basis of what used to be bought or what might be bought now by a very restricted clientele. Here are some of the considerations which might be helpful to sales managers in making a thorough study of their local situation.

1. *Land planning and land use:* There have been many modifications in recent years in land subdividing. Years ago, lots were generally laid out narrow and long, in order that stables and other buildings could be placed on the rear and at a distance from the house. Alleys were provided for access to these facilities and for the necessary removal of household refuse. Today, the only accessory building is the garage which frequently is incorporated with the house structure. There is little or no household refuse to remove. Small houses are being designed almost generally with the broad front to the street, and driveway from the street.

2. *The housing shell:* The average house not only will be smaller because of cost limitations but also because the average family is smaller today than formerly. Better planning, however, is providing facilities in the modern house equal or surpassing those in the larger houses of yesterday.

3. *Equipment and facilities:* While sound foundations, walls and roof are the prime essentials, livability depends upon the facilities and services provided. Plumbing, heating, lighting, cooking and refrigerating units are no longer luxuries but necessities. It is difficult to draw a line between essential and non-essential luxuries, in the form of certain types of conveniences and comfort equipment, as many of the latter affect salability. But there is obviously a limit to the cost of equipment features in the volume market. Admitting that houses should be planned for effective and comfortable living, it is apparent that equipment must be specifically designed and built for the volume market. This need has already been recognized and some encouraging progress is evident.

The Architect as the Adviser in Housing Activities

Since the Producers' Council was specifically organized to unite material producers and architects in various activities affecting the quality market, it is unnecessary for me to expand upon the value of injecting the architect more and more into local small house building. Not only is his training and experience of value in better design embodying maximum utilization of space and economy of construction, but his professional and technical viewpoint is most essential to establishing quality material specifications and finally, through his supervision to insuring adherence to these requirements. The architect occupies this position today in every other type of building construction and he should occupy it in small house building. Responsible material producers and utility executives stand to gain much when the architect is specifying materials, equipment and services. Producers and utilities would have definitely established points with which to deal, rather than the multiplicity of contacts now required.

Assuming that the utilities can profit from the establishment of local home building service facilities embodying architectural participation, it will be distinctly to their advantage to encourage and assist the formation of such facilities and promote their successful operation. Primarily the Plan is a merchandising program which needs the talent which material producers and utility companies encompass in their sales executives and sales departments. Success of local efforts will depend as always upon the willingness of local leaders to give support to the undertaking. Progress will be slow in the beginning and persistency, the greatest requirement. The program offers a challenge to every responsible business element. We hereby extend a broad invitation to the Edison Electric Institute to participate actively in this opportunity for community betterment. We shall count on your interest and support.

Those who wish to have more complete information on the Federal Home Building Service Plan to assist the small home builder may write direct to Federal Home Loan Bank Board, Washington, D. C.

In the Public Interest

By Bernard F. Weadock
Vice President and Managing Director, Edison Electric Institute

An address before the Sixth Annual Sales Conference, Edison Electric Institute, Chicago, March 21-24

IT is quite appropriate that this meeting should be held in Chicago. Chicago from its earliest days has been a great electrical city. It was here that the first trade association of the industry was formed—the National Electric Light Association. It is here we meet to discuss current problems in the public interest. You gentlemen represent one of the most important branches; that is, the promotion of the greater use of electricity. You have accomplished much, but there remains plenty more to do.

When the trade association was organized in 1885 the first proceedings indicate some of the "problems" then confronting the industry. The same proceedings indicate that some of the "problems" were informing the public, street lighting, the quality of electric bulbs, the efficiency of gas lighting and the competition it caused the lighting companies. Questions were raised as to whether it was prudent to make a statement of the exact cost of plant and the cost of operation because, it was charged, the companies were having difficulty in collecting rentals because the customers believed the companies were earning 100 per cent on the investment. Mayor Harrison commented on what a startling thing it would be when bottled electricity propelled a street car. The employee question was a very important one. One man was employed who spent the daylight hours putting carbons in his lamps fully half a mile from where the power house was located and then he rushed back to the power house to start the machinery and it having been started, he made the circuit of his lights two or three times. Street lighting at that time, according to the proceedings, was successfully accomplished by placing lights on steel towers ranging in height from 125 to 267 feet. The convention noted that Detroit was very handsomely lighted, with 90 towers having 360 lights.

That gas was recognized as a severe competitor is shown by one proposal which I quote in full:

"That a committee be formed 'to combine with a view to showing how many hotels are blown up and a great many other accidents brought about by explosions of gas and how many people have gone to sleep in these different hotels and have awakened up in the morning ready for the undertaker simply because they did not turn out the gas'."

MR. WEADOCK

Contrast those "problems" with your questions of today and I feel confident that you can approach your task with greater enthusiasm when you appreciate that your job is made easier by the advancements in the art. This industry is still in its infancy even though our accomplishments merit universal credit. Some day, looking backward, we will find that the things done at this meeting will be out dated as much as were the high-towered street lighting, the carbon street lamp and the fear of gas competition.

During the last decade the industry has been called upon to meet the uncertainties of political attack and economic depression. At times the burdens cast upon us by these conditions seem to have conquered our willingness and ability to carry on. The facts are that these burdens have retarded our growth and development but they have not and will not stop our progress. False prophets have arisen and arise in each period of depression to proclaim that this country, its industry and its people have reached their ultimate destiny and are about to commence a rapid decline and be buried in the mire of retrogression. I for one have no faith in these prophets. This country has suffered economic depressions since its very beginning. Had the colonists listened to the pessimists, there would be no United States today. Had those who suffered the loss of their all in the panics of 1893, 1904, 1907, 1921, 1929 and 1933 listened to these prophets and pessimists, where would we be today? Time and events have proven that this country possesses the necessary courage, ability and fortitude to rise again. The pages of history record darker days than the ones we now live in and the same pages record our return to the road of prosperity and advancement.

Prior to 1933 the national policy was private development under government regulation. Under this policy encouragement was given to construct necessary and economically sound hydro plants throughout the country. This policy gave us water power upon the rivers and in the rugged mountains of the country. The hydros constructed by the government since 1933 under the new policy are generally uneconomically located due to the fact that the existing private utilities in the vicinity have excess capacity. These government projects extend from Passamaquoddy in the northeast, to Santee Cooper and the Tennessee River in the South, Boulder Dam in the southwest, Central Valley in northern California, Bonneville and Grand Coulee in the Pacific northwest and Fort Peck in Montana. Originally all of these dams, with the exception of Hoover Dam, Muscle Shoals and TVA, were initiated by Executive Order without the benefit of legislative debate or discussion. Had there been legislative debate, some of the facts now known to legislators and the man on the street, would have been duly considered, such as:

1. That steam generation in general is cheaper than hydro.

2. That steam generation gives more employment to general industry than hydro.

3. That the TVA yardstick is too short.

4. That the amount of taxes which are not paid upon government projects vitally affect the life of the subdivisions of Government.

5. That calm analysis of subsidized government projects shows them to be uneconomic.

6. That they afford destructive and unfair competition.

7. That the sale of power from the Government dams is not as easy as the planners estimated.

8. That the Electric Light and Power Industry is not owned in Wall Street but is the property of from 3 to 5 million American citizens who have invested in them.

9. That America cannot advance without the support of the private investor.

10. That the shot-gun method of acquiring property of citizens must be abandoned and the investor told that he may expect a reasonably fair price for that with which he parts.

Negotiations are now pending for the purchase of certain properties in the northwest, in Texas and in Nebraska and the published proposals indicate an abandonment of the shot-gun method.

That the loss of taxes is a serious problem to branches of government is best evidenced by the fact that there has been introduced in Congress a bill to require the TVA to pay taxes, that the State of Tennessee is considering legislation to obtain tax revenue from government plants, that the State of Oregon has enacted a law designed to collect taxes from public electric plants and to require that they operate on a more equal basis with private companies. Other instances might be cited where the loss of private revenue is so keenly felt. This means that public plants, whether owned by the Federal Government or states or municipalities, would be completely eliminated as competitors if required to pay their just portion of the taxes.

Municipal competition was practically stalemated until the government encouraged municipalities to engage in the business and in furtherance of that program gave 45 per cent of the cost and accepted bonds at low interest rate for the balance. Under this hypodermic, aided and abetted by tons upon tons of propaganda, we find that the government had spent $192,507,679 on 470 different projects as of October 1, 1938, to establish new competitive municipal plants and large or district power projects. Public utterances of responsible government officials have stated that this method of finance has been discontinued. It is interesting to note how this industry has withstood such tremendous odds. I desire to call attention to the results of municipal plant and franchise elections for the years 1933 to 1938, which is as follows:

NUMBER OF ELECTIONS HELD

	For M. O.		Against M. O.	Total
1933 ...	78	70.3%	33	111
1934 ...	58	55.3%	47	105
1935 ...	66	60.0%	44	110
1936 ...	49	38.6%	78	127
1937 ...	43	44.3%	54	97
1938 ...	108	50.7%	105	213
	402		361	763

RESULTS WEIGHTED BY POPULATION

	For M. O.		Against M. O.	Total
1933	4,595,096	70.5%	1,924,509	6,519,605
1934	3,904,134	63.3%	2,251,362	6,155,496
1935	720,075	58.5%	589,707	1,309,782
1936	1,572,697	27.4%	4,162,188	5,734,885
1937	334,562	11.4%	2,605,458	2,940,022
1938	510,744	36.1%	906,192	1,417,936
	11,638,308		12,439,416	24,077,726

The figures in the table do not include state elections in California to authorize the issuance of revenue bonds for public utilities by a simple majority of the voters, and in Oklahoma to allow the issuance of revenue bonds without a vote of the people. These proposals were defeated approximately 3 to 1.

	Revenue Bond Proposal	
	For	Against
California	511,305	1,350,861
Oklahoma	34,170	91,441

Much of the agitation for these projects was based upon a claim of high rates of private companies. I desire to call your attention to an analysis of the last Federal Power Commission Rate Survey. The arithmetical average for the entire United States between public and private plants for different consumption is as follows:

ANALYSIS OF FEDERAL POWER COMMISSION RATE SURVEY
Arithmetical Average as of January 1, 1938

Number of Places Supplied Entire U.S.A.		Average Charge in Cents per Kilowatthour Kilowatthours Used per Month											
		15		25		40		100		250		500	
by Gov't	by Co.'s	Gov't	Co.	Gov't	Co.	Gov't	Co.	Gov't	Co.	Gov't	Co.	Gov't	Co.
1,998*	17,421	8.3	8.4	7.6	7.6	7.1	6.9	5.0	4.9	3.8	3.4	3.2	2.4

*This figure includes only those plants that submtted rates. The total number is 2,003 according to the F P C 1938 Rate Series.

Much of the legislation relating to public utilities was punitive in character. It was introduced by, lobbied for and passed by what is known as the Power Bloc; that is, legislators building up their political careers by attempting to tear down the electrical industry. Prejudice, bias, and ignorance influenced such legislation. Harold Brayman, a Washington correspondent, writing in the *Public Utilities Fortnightly* of March 16, 1939, has this to say in regard to that Bloc:

"The 'Power issue' is no longer the magic political cry that it once was except in a few sections of the country where local conditions still make it effective. The 1938 elections demonstrated this beyond question. The group of aggressive anti-utility leaders in the House of Representatives was not decimated in the election; it was cut in half. Of fifty-four Representatives in the last Congress who were rated in this classification, twenty-nine did not come back."

Recently there was pending in the Senate the question of a TVA appropriation for an expenditure for Gilbertsville Dam. The appropriation was obtained by the very narrow margin of 9 votes. Today legislators approach the question with more fairness, with greater intelligence, with more courage and with accurate information.

Lincoln, and two thousand years before him, Pliny, observed that you can't fool all the people all the time. The people of America have been fooled aplenty on the power question. Many newspapers were completely fooled by the flood of propaganda originating from the Government for the purpose of giving momentum to its program to destroy if possible private operation of public utilities. Today casually glance at the papers and you will find news items and editorials criticizing government for its attitude toward the utilities and commending the utilities for their accomplishments. I would call your attention to an article in the *New York Times,* famed for its impartiality, commenting on an article, by a well-known utility baiter, published in the *Yale Review,* in which the *Times* says: "The reader may be pardoned if he nods now and then as a man might in whose nostrils rested the heavy scent of old straw much threshed."

At the moment this industry suffers more from lack of investor confidence than anything else. Their confidence has been shaken by the repeated assaults upon the industry which lead them to believe that any money they venture in the business would be lost. In the financing of the industry a small minority have been unmindful of their obligations to the public. The great majority have

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Our Job May Not Be Yours

By E. F. Jeffe

Vice-President, Consolidated Edison Company of New York, Inc., New York, N. Y.

An address before the Sixth Annual Sales Conference, Edison Electric Institute, Chicago, March 21-24

OUR job may not be yours and the methods which we believe are necessary to develop our business may not be the methods which would best succeed in your territory. No matter what corner of the world one may hail from, it is acknowledged that there is but one New York. It is different from other localities in many ways and particularly different in the things which affect our business. In a greatly mixed population served by our companies of over 7,900,000, we have in excess of 1,960,000 residential electric meters. These meters, however, do not account for all the residential users of electric service, for the submetering practice is still extensive in our territory and many thousands of residential users of electric service are not our direct customers and the company has only limited direct contact with them.

Again, the vast majority of our residential customers live in multiple family houses. Due to the type of building construction in this territory our bill collectors, meter readers, and other than sales department employees, on but very few occasions have an opportunity of meeting our customers. But a small fraction of our residential customers dwell on ground floors. This characteristic alone accounts for the impracticability, if not the almost impossibility, of the promotion of such heavy duty usages of electric service as electric ranges and electric water heaters. These conditions make it necessary that we devote so much of our effort to the promotion of a multiplicity of small appliances. The habits of the average New York residential customer are different and distinct from those residing in other localities. Not nearly as much time is spent in the place of residence by those living in New York as is by those living in other territories. These are not mere bold statements—they are facts with which most of us are familiar as the result of careful studies. I do not mean to imply that the New York market is more difficult than other markets, but I

MR. JEFFE

am firmly convinced that the approach of this market must be one cut to fit our particular conditions.

In our territory we have an active buying public and because of their commercial pursuits they readily sense offerings which have value. Our customers are not necessarily bargain hunters but they will buy when exceptional values are presented to them and when terms for buying to fit their income are made available. The service which we sell cannot by itself be utilized by our customers. They must secure motors, refrigerators, air conditioning equipment, irons, vacuum cleaners, lamps, toasters, radios and many other electrical appliances, before that which they buy from us can serve them. We know that it is our responsibility, if our business is to be developed, to see that our customers secure and use electric appliances.

We know that the consumer alone possesses the sovereign power to decide what to do with his purchasing power. Therefore, we endeavor to develop attractive plans so that the consumer may decide to use his purchasing power for appliances which will use the service which we sell.

Too long, in my opinion, has low electrical consumption been blamed on the cost of electric service. On the contrary, low consumption keeps rates higher than they need be otherwise. It is my belief that if low electrical consumption exists, it is because of the lack of possession of electric appliances; because these appliances are not placed within the reach of customers—either through lack of proper sales promotion, through price structure or through failure of term payment plans to provide purchasing power within the reach of the low income customers.

The price of gasoline has not played nearly as important a part in the development of the automobile industry as the price of the automobile has played in the development of the gasoline industry, and if we and the makers and the sellers of electrical appliances will take a page from the book of the automobile industry—volume sales, large aggregate profits, greater electric consumption and the many beneficial advantages to customers will result. So with these basic thoughts, we have bended our efforts to increase the production and the distribution of goods and services related to our industry and we honestly believe that if we, as business men, are successful in these efforts—we will go a long way toward getting the country out of the recession.

Fundamentally, to further understand that which we are pleased to call the success of some of our promotional activities, one must know our sales department structure. We have no specialists selling refrigerators, no specialists selling vacuum cleaners, no specialists selling irons, toasters, radios. Each sales representative is assigned to a specific location in our territory. This sales representative negotiates all of the company's business in the location to which he is assigned. He takes applications, adjusts complaints, makes periodic calls upon the customers and promotes the sale of electric appliances.

Your chairman has asked that I particularly address you on our recent

"Jobs for Men—Edison's Bargain Package for You" campaign which was conducted during the months of September, October, November and December of 1938 and during which period of time we sold 230,609 packages consisting of 922,436 electrical appliances and 922,436 electric bulbs, having a sales price of $5,649,920. Briefly, the package consisted of: a General Electric 6-tube AC-DC Table Model Radio; a Westinghouse 5-pound, 800-watt AC-DC Iron; a Proctor Turn-O-Matic Toaster; and an Artistic 6-way I E S Floor Lamp with hand-sewn shade, complete with three 30-watt and one 100-200-300-watt General Electric Mazda Bulbs, the four items having a normal retail price of $53.25, but which during the period of the campaign were sold to our customers for $24.50. Furthermore, those who desired could arrange to purchase these appliances on the basis of $2.50 down and $2.00 a month for 11 consecutive months without any additional financing charge. The campaign came at a time of decided depression and stagnation in the retailing of appliances and at a time when retail sellers required a stimulus. These retail sellers therefore joined wholeheartedly in a campaign which was based on selling—selling which was made possible by lower markups, easy installment payment terms, larger net profits through volume sales, and by the dealers' readiness to assume the employment of additional sales forces and the expenses of selling. It proved, we believe, to be a cooperative application of intelligent energy from the producing side, the selling side and the buying side. "Jobs for Men—Edison's Bargain Package for You" was more than a slogan—it was an aggressive selling campaign with definite constructive objectives.

Previous campaigns conducted by the company gave us ample proof that our customers like to buy—that buying satisfies their normal human instincts. But we had also learned that campaigns based on slogans with nothing behind them but the urge to buy, appeared unreasonable and produced resentment. Through volume orders guaranteed by the company, the manufacturers were able to purchase their raw materials in volume, to produce in volume and to schedule their work to utilize an otherwise idle and costly overhead. This resulted in lower production costs and correspondingly lower prices to our customers.

The stagnation in the retailing of electric appliances was turned, through this campaign, from a dealer's problem to a dealer's feast. The results of the campaign again proved that customers will buy if a selling job is done and if vehicles are provided for the customer to secure the things he wants within his means. This campaign was launched only after a careful survey and a preliminary trial in certain sections of our territory two years previous, at which time over 53,000 somewhat similar packages were sold.

Nine thousand five hundred and twenty-five employees were added to the payrolls of the manufacturers—4340 to make the radios; 4700 to make the lamps; 225 to make the toasters and 260 to make the irons—in addition to some 300 former employees of the lamp manufacturer who were put back to work. 5,389,500 man-hours of work were required for the production of these appliances. There was not sufficient manufacturing equipment in all the plastic factories in the United States to produce the diffusing bowls which were supplied for the three candle-lights on the six-way floor lamp. It was necessary for the plastic manufacturers to make up additional manufacturing equipment to take care of the requirements.

Forty-six per cent of the total number of 6-way I E S floor lamp tags issued in the United States for 1938 were issued for the lamps sold in this campaign alone. The manufacturer of the floor lamps required the placing of an order for 1¼ million sockets and switches, and three million feet of electric cord. This manufacturer was the largest purchaser of zinc in the City of New York during the period of the campaign. More than a carload of glass reflectors were shipped to the lamp manufacturer daily. The toaster and iron manufacturers required new dies, new molds, new machine tools and new plating equipment and the quadrupling of the then existing manufacturing facilities for such molded parts as handles and dials. The lumber used in the radio cabinets added up to 900,000 running feet. Shipment of the radios required 137 freight cars. The molded parts used in these radios weighed 80 tons. Appliance dealers added 2400 additional sales help. Each package sold in New York City produced 49c., or a total of $105,000 for the New York City sales tax for the relief of the unemployed.

The customers of the company who purchased these packages saved over $6,630,000 between the standard list prices of the articles and the campaign price.

The extent of the undertaking is more clearly brought home when it is realized that one out of every eight of our customers secured a package. Our explanation of this volume of business is that we produced an attractive buy for our customers under terms of payment which they could afford. Over 95 per cent of the purchasers of these packages availed themselves of the monthly payment terms. The rate of sales was a steady one—it averaged 3000 packages per day and at the end of the campaign it was fully as strong as when it started. It is my opinion that we might well have continued the campaign for an additional six months and if we had, we would have sold one-half million packages.

The 685 cooperating dealers, including a number of department stores, earned a profit of $797,041. The highest amount paid to any one dealer was $20,598.30—the lowest amount paid to any one dealer was $32.90. It is interesting to note that while in previous campaigns the ratio of company sales to dealer sales ranged from about 12 to 1, that this campaign produced efforts on the part of the dealers which brought this ratio of company sales to dealer sales to 1.2 to 1. Never before had the interest of the forty-odd thousand employees of the company in building company load been stimulated to the degree that it was in this campaign. Company employees earned as bonuses $125,395. The sum of the profits paid to cooperating dealers and the bonuses to company employees represented the dollar difference between the cost of the appliances to the company and the customer cost of these appliances. No sales were permitted to other than customers of the company. All packages were delivered by company forces and no deliveries were made except to premises supplied with company service. Approximately 3500 orders were rejected on the basis that the purchasers were not customers of the company. Approximately 1000 orders were received from purchasers residing in a spread from Canada to Texas. All those whose orders were rejected were advised that they could purchase similar articles in various department stores and from their local appliance dealers.

The great activity on the part of the cooperating dealers was occasioned by

the fact that they shared in the profits of the campaign proportionately to their own individual sales. The profit on all company-made sales was placed in a pool and at the end of each month was distributed to the cooperating dealers in proportion to the number of sales which they had individually made. This developed an effort on the part of the dealers which was so satisfactory to themselves and to the company that the same method of operation has been adopted in our present automatic refrigerator campaign.

No additional employees were taken on by the company during the campaign, although approximately 30 in clerical help were transferred from other activities to sales activities for the period. Outside trucking facilities were required by the company to the extent of $27,000 and company trucking facilities worked overtime to the extent of $30,000.

Deferred payments are coming in with exceptional promptness and if the experience of the previous Bargain Package Campaign on delinquent payments is a guide, the company losses due to delinquent payments will be less than 3 per cent.

The dealers were enthusiastic over the success of the campaign—so much so that in our present automatic refrigeration campaign they are in to a man as are also some of the largest department stores operating in our territory, such as Bloomingdale's, Hearn's, Gimbel's, Namm's, Loeser's, Abraham and Straus, Davega, Vim, etc. During the package campaign, in addition to their added sales help, they spent a considerable amount of their own money in advertising. We shouted about this campaign in our market places through attractive newspaper advertising, billboards, over the radio, through our bill enclosures, through every contact employee in the company. The advertising was carried out without increasing the usual promotional advertising that would ordinarily have been done by the company during this period. Virtually the entire promotional advertising of the company was directed towards the Bargain Package Campaign and the manufacturers who received orders for the appliances also contributed to this advertising.

Irrespective of the fact that the campaign was launched during the period of worst depression in the electric appliance field—during a period of hesitation in general business, the campaign resulted in the sale of more electrical appliances than were ever previously marketed in a comparable period. The campaign rendered a great social service to our customers. It provided many thousands, who had not previously enjoyed the advantages of such electrical appliances, with their use. It increased our residential consumption. We estimated that if the appliances sold in these packages were original connections to the lines of our company, they would produce an annual revenue of approximately $3,900,000. However, discounting replacements, moving from system lines, etc., we estimated that each package would produce an increase of 150 kilowatthours annually, with a resulting increase in revenue of approximately $1,850,000 annually. These estimates did not take into consideration the fact that old appliances which are replaced with more modern new appliances will develop greater usage and correspondingly larger electrical consumption.

Checks are constantly being made to determine the accuracy of these estimates. It is too early to draw exact conclusions of the benefits that the company received as a result of the sales of Bargain Packages, but from a spot check made covering a four-month period in ten premises in each of our 27 District Office territorities, or in a total of 270 premises of customers who purchased the Bargain Package, we find that in this four-months' period, their consumption has increased 19.7 per cent and their payments to us have increased 14.7 per cent. This averages to an increase of 134 kilowatthours per year for each of the customers who purchased a Bargain Package and corresponds closely with our original estimates.

We heard a great deal during the period of this campaign about price reductions. In this respect, I was very much interested in a recent advertisement by the General Electric Company which read—"Toys or typewriters, lamps, bulbs or bathtubs—whenever the cost of an article is lowered through economies in production, more people can buy the article. And those who could buy the article anyway have money left to buy other things." That, too, was our psychology in the Bargain Package Campaign. It has been the basis of all of our campaigns. We are convinced that if economies in production and sales are passed on to the ultimate consumer that all concerned will reap greater net profits.

Some have claimed that the Bargain Package sales interfered with the sales of other appliances. This, we know, is not so; for concurrently with the Bargain Package Campaign, we conducted a campaign on General Electric vacuum cleaners. Approximately 30,000 of these General Electric Campaign vacuum cleaners were sold during the same period of time in which the Bargain Package Campaign was effective. It was an all time record for vacuum cleaner sales in our territory. The vice-president of the Proctor Electric Company, which supplied the toasters included in the Bargain Package, recently wrote: "Our own toaster sales in New York since the first of the year are higher than the same period last year by a considerable margin."

Following the Bargain Package Campaign and the General Electric vacuum cleaner campaign, we engaged in a three-month activity on the General Electric Sun Lamp. Approximately 5000 have been sold to date and we know that these sales have greatly exceeded the original estimates of the Sun Lamp Department of the General Electric Company.

When the campaign was concluded on December 31, for several days thereafter orders to the extent of about 500 packages per day were submitted. These, however, were returned and not filled because of the initial statement that the campaign would be terminated on December 31. After December 31 the articles which had been included in the Package Campaign were prominently and attractively displayed in our windows and in our showrooms at full list price. Since that time, orders for these appliances have returned to normal and about 200 of these individual appliances are sold in our showrooms per month, which number of orders in a month at the full list individual prices is less than the number of orders for such items taken every 3 minutes in the combination package price deal.

The results prove that our rates are right and that our rates are not the deterrent to greater use of our service and that our customers will use our service if they have the vehicles with which to use it. The campaign has brought to our customers appreciation of the efforts of our company in their behalf and has gone a long way toward customer goodwill through practical demonstration. It has proven to them that not only can they secure the highest grade service at

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Stepping Up Dealer Sales

By Dr. Kenneth Dameron

Professor of Marketing, Ohio State University, Columbus, Ohio

An address before the Sixth Annual Sales Conference, Edison Electric Institute, Chicago, March 21-24

DESPITE the transfer of title which may take place in each step of the sales process the sale is a continuous process. The manufacturer, the distributor, the utility or the dealer can stop at nothing short of a satisfied customer. The retail transaction or sale to ultimate consumer is generally made by a retailer—nevertheless, the manufacturer and the utility are interested in having that sale made.

The merchandising of electrical appliances introduces a new factor, the utility. The utility seeks to increase the domestic consumption of electricity through more intensive and wider use of electrical appliances. Directly or indirectly, the utility finds itself in the electrical appliance business. Whether the utility is actually making the sale or encouraging some one else to do it, its interest is the same. The utility is a manufacturer of electric power and has the same interest in the consumption of its product as does the manufacturer of the appliance. The question posed by manufacturers, distributors and utilities alike is—"How may dealer sales be increased?" In short the problem of stepping up dealer sales is paramount. Our initial problem is related to the sale as a continuous process and encompasses the efforts of manufacturers, distributors and utilities to aid the dealer in merchandising electrical appliances.

The utility is today a most significant factor in electrical appliance merchandising. Many sales are made by retailers which result from the pre-selling and continuous promotion efforts of *utilities*.

Need for Selective Distribution

In considering the numerous devices provided by the manufacturer (and in some cases distributor) and the utility for the purpose of stepping up dealer sales one is tempted to praise these agencies for their efforts and to asperse the retailers for not taking advantage of them. However, there are certain distribution forces at work which tend to limit the effectiveness of these efforts. One is the presence of unselected dealer organization and distribution. There are

DR. DAMERON

no doubt a great number of weak unqualified dealers—a controlled and selective dealer distribution would raise the power of dealer cooperation efforts. A part of this belongs to that age old problem of distribution—"are there too many dealers (retailers)?" Various estimates have been made of the number of persons required to enable stores of various kinds to enjoy a volume of $50,000 per year. For example, a town of over 7,000 population is required for hardware stores. In the appliance field, one estimate states that a town of 30,000 is the minimum sized town that can possibly be expected to support two full-line appliance dealers of any one manufacturer.

Not only are there too many dealers who are not doing an effective merchandising job—but efforts to increase sales are further thwarted by "too many lines and too many prices." This situation limits the effectiveness of dealer cooperation. It causes the dealer to flit from item to item and manufacturer to manufacturer depending on where he can receive what seems to be the best proposition at the moment.

All too often the dealer has not had the training for an expert merchandiser. He may have entered the business as a repair man or electrician. One of the obvious aspects of this situation is the fact that he is a poor store housekeeper. His store is unattractively arranged and he himself may not look the part of the modern retailer of appliances.

Conditions such as these cannot be remedied over night and therefore we must seek to improve the situation as we find it. To this end we had best begin at home and first of all get rid of our sales ego—sometimes called manufacturer's ego. They have an overdeveloped producer viewpoint and do not always place themselves on the firing line of consumer merchandising. In practice they feel that they are doing everything just right and observing every rule of successful merchandising. This same attitude prevails with utilities although, here it is marked by a more paternalistic attitude.

The utility situation is defined by the nature of its merchandising activity. There seems to be four possible situations:

1. Utilities operate retail divisions and merchandise competitively with other retailers.
2. Utilities merchandise—but urge consumer to see dealer first.
3. Utilities merchandise one or two specialty items and make no effort to sell other items.
4. Utilities that do no merchandising but make every effort to merchandise and promote sales through the dealer.

This paper will discuss dealer cooperation and coordination rather than utility merchandising as such.

Forms of Cooperation

Manufacturers, utilities and distributors use one or more of the following methods of dealer cooperation. Because of their local influence, utilities are best able to utilize most of them. As a prerequisite of our analysis of stepping up dealer sales it is necessary to examine the forms of cooperation now in use. These are grouped below under four main headings.

I. Pre-selling and Consumer Education Activities Designed to Promote the Use and Sale of Electrical Appliances

1. Home economists whose duties are to promote the use and sale of appliances. In some instances the services of home

economists are made available to the dealer without cost.

2. Demonstrators who function in dealer's place of business as well as in the homes of users.

3. Appliance shows and cooking schools conducted in cooperation with dealer.

4. Consumer education in the uses of electricity in the home and in the use and care of appliances. Lectures on better lighting and cooking schools may also be included in this category.

II. Market Analysis and Market Development

1. Use of utility company employees to locate prospects.

2. Cooperative dealer sales contests to develop market.

3. Market information both local and national. The dealer knows very little about the possibilities of the rural market. Montgomery Ward and Company and Sears Roebuck are endeavoring to reach this market with truck merchandising. They are receiving the coopeta-tion of the utilities.

Essentially the rural market problem is one of the proper dealer coverage in towns of 25,000 and less.

A "Next Purchase" survey among middle class families made by Ross Federal Research Corp. indicates demand for appliances as indicated below. (See *Sales Management,* February, 1939, issue.)

	Per Cent
Automobiles	24.9
Mech. Refrigerators	11.7
Trips	11.5
Homes	10.2
Furn. and Drapes	7.9
Radios	6.6
Fur Coats	4.8
Rugs and Carpets	3.8
Home Improvement	3.4
Elec. Washers	3.1
Gas Ranges	2.6
Vacuum Cleaners	2.3
Pianos	1.4
Oil Burners	1.1
Elec. Ranges	1.0
Ironers	1.0
Pay cash or open credit	42.2
Installments	53.4
Undecided	4.4

N.E.M.A. estimates an annual market in excess of four billion on 15 appliances.

There is also a market among low income families. A recent study of the United States Department of Labor indicated that less than 6 per cent of these families (p. 447, February, 1938, *Monthly Labor Review*) were buying appliances except light bulbs and lamps.

III. Dealer Education—Sales Training —Trade Relations

1. Dealer bulletins issued periodically giving news of best sellers, new products, sales leaders, developments in electrical merchandising, etc.

2. Selection, training and placement of salesmen. Weekly meetings which among other things perform a sales training function. Help dealer train salesmen.

3. Advice and help on merchandising problems, as for example, stock-keeping control, expense allocation buying, display, etc.

4. Testing of appliances. (Also a form of consumer education.)

5. Suggestions on time payment plans, trade-in allowances, etc.

6. Traveling laboratories—give dealers training in technical products.

7. Service manuals dealing with the selling and servicing of appliances.

8. Factory schools especially helpful for products of higher unit value.

9. House magazines which give general sales information.

10. Business paper advertising which is informative inasmuch as it gives information on market and products.

(There is a dealers market on education. During times when business is difficult to secure dealers are more receptive to help from utilities and manufacturers.)

IV. Advertising and Sales Promotion

1. Manufacturers and, if case warrants it, utilities send advance proofs to dealers. This enables dealer to coordinate selling effort and also serves as a dealer education medium. Manufacturer and utility salesmen also make use of these advance proofs.

2. Design windows and make store layout.

3. Prepare consumer advertising materials to be used by dealers.

4. Point of sale advertising.

5. Cooperative advertising (now limited by Robinson-Patman Act). Cooperative newspaper advertising brings quick results. Cooperative plans make for coordinated effort.

6. Utility advertising which (1) sells the service as, e.g., electric cookery or (2) sells the products as, e.g., the range.

7. Activity coordination. Utility performs a merchandising cooperation function by bringing manufacturer, distributor and dealer together in effort centered around a central theme for specified period.

Media

The foregoing classification of dealer help methods suggests the media employed. Among the media of dealer cooperation may be included: Motion pictures, lectures, manuals, correspondence courses, laboratories, conferences, etc. It is quite possible in many cases that proper method or form may have been selected —but medium of presentation is ineffective.

Stepping Up Dealer Sales Through Sound Application of Dealer Cooperation

How can we make our work with dealers more effective? Recognizing the trade practices of the industry and the difficulties inherent in distribution, the following principles are the result of a study of dealer cooperation effort on the part of manufacturers, distributors, and utilities. The picture is not one-sided as the study includes personal interviews with dealers.

I. Physical Make-Up of Plans

1. Do not confuse the dealer. The plan or idea should be simple and easy to execute. Furthermore, it may prove a mistake to offer the dealer too many plans from which to choose. The dealer may refuse to look at an involved looking prospectus. A well worked out, simple, single plan may prove more effective.

2. Make dealer cooperation pieces more practical. Many dealers cite need for small practical pieces such as window cards. Dealers not skilled in lettering would welcome many small window and inside-the-store displays.

II. Principles Involving Merchandising Plan To Dealer—Securing His Cooperation, etc.

1. Consult the dealer in formulating plans.—It is necessary that we do more than consider the dealer—we should consult him. As long as we are dependent upon the dealer for contact with the consumer as well as the final sale of our product, he must be consulted in advance of the setting up of dealer-help materials. By consulting him the manufacturer or utility may learn more of the needs of the dealer as well as the means of supplying these needs. The utility is in a favorable position to have this close contact. Manufacturers may secure it through their distributors and sales representatives. Although, the fundamentals of selling remain the same, local conditions differ. Anyone who has a hand in

making a plan is much more interested in *it*.

2. Confer with dealers during selling season.—Once a plan is in operation, it is desirable to confer with dealers from time to time. Group conferences may be arranged at which merchandising problems are discussed. These conferences may have material bearing on the nature of the cooperative advertising and they may result in a change in the merchandising plans. Merchandising is too dynamic to be placed in a strait-jacket with the title "Six Months" plan.

3. Profit from past endeavors.—I have mentioned the desirability of conferring with dealers and doing research in the field in advance of setting up dealer cooperation plans. Competitors' activities must also be considered. However, reactions to past endeavors as well as results from them should be considered in every plan of dealer relationship.

4. Advance planning and coordination.—It is now almost axiomatic that advance planning is essential to successful sales promotion. Advance planning permits flexibility as well as the coordination of sales effort.

5. Follow-up.—The utility close to the scene of dealer selling should be able to follow-up on its promotional and cooperative efforts. The manufacturer quite often must depend on his distributors for this follow-up. Dealers complain that the manufacturer will have a perfectly good plan, but that the distributors don't "follow through." Perhaps the need for manufacturer follow-up is with the distributor.

6. Continuous cooperative promotion.—Dealer cooperation work must be continuous. It cannot be done by periodic campaigns nor by hit and miss efforts. Piece-meal promotion has been one of the defects of this industry. Continuous effort does not lose sight of selection of proper item nor of the proper timing of special event.

7. Avoid appearance of exercising control over dealers.—This is in part a matter of attitude in working with dealers. Confidence is established through individual analysis and treatment of dealers' problems. Plans must fit size and character of business and include location and financial position of dealer.

8. Item may affect results.—Some utilities and manufacturers emphasize promotional items and avoid spending time and money on well-accepted appliances. This depends in part on the market factors of a given region or locality as well as the degree of specialization of the manufacturer. Furthermore, there may be a division of labor to the extent that manufacturers will promote all appliances, while utilities may concentrate on newer specialty items.

9. Merchandise dealer cooperation to the dealer.—It goes without saying that materials and plans should be properly conceived and executed. But more important they must be merchandised to the dealer. He must be shown how they will increase his business, why he should use them, where and how he should use them. Again, there is need for the follow-up. . . . Sales management and advertising management converge at this point. To set a quota for salesman or distributor-dealer cooperation and ways of making it effective must be considered. . . . Subsidy is not the ideal feature of cooperation. Many producers and utilities have found it desiderable to charge the dealer for certain materials. Similarly, in certain instances, the dealer has been able to charge the manufacturer for display space.

This notion of merchandising extends beyond dealer aids. The dealer must be made enthusiastic about the manufacturer or utility advertising campaign so that he will want to "tie in" with it and to make it serve him in a local manner.

Will large retailers use materials? This depends on the attitude and policy of the large store. Some are interested in building store name; others interested in building store name through the promotion of well known brands. However, department store ownership groups are experimenting with private brands and with some success.

Dignify your materials. Show the dealer that you place some value on them. Don't refer to them as give aways or helps. Speak more in terms of promotional plans and ideas.

Showmanship and the dramatizing of promotion are ever present factors in effective merchandising of dealer cooperation.

10. Use sound economic ideas.—Without commenting on individual cases, there are instances around the country of sales drives by manufacturers and utilities built around a "make work" theme. Whether or not sales make work depends more on condition of inventory. If a producer is overstocked a sales drive may not make work and in long run may make no change in employment situation.

11. Be expert in store politics.—There is a lot of good old-fashioned politics involved in any scheme of dealer organization and cooperation. The manufacturer and the utility must therefore be able to sense the intangibles and to interpret store organization structure in such a way as to get the plan working.

12. Timing. — Supporting materials should be issued in accordance with demand for product and the time dealers will be promoting a given item. The dealer should not receive the material too far in advance of its use. A dealer help schedule set-up like an advertising schedule will enable the utility or manufacturer to secure cooperation.

13. To make contests effective.—Dealers tell me they have been exposed to many contest promotions. Naturally, most of us would rather play than work and the contests afford a sales drive which seems more like play than work. However, contests may well be conducted by trade groups rather than individual businesses. It's much like the situation at a ball game when one person stands up to see the game, then others stand up, and then none can see because all are standing up.

III. Principles Involving Subject Matter of Dealer Plans

1. Sales education vs. product education.—A most common and sometimes costly form of dealer cooperation is the sales course. Ineffective presentation is one reason these sales courses are not more productive. There is too much emphasis on *product* education rather than sales education. It is true a dealer can't know too much about the product—but *how* and *when* to apply his knowledge is generally the most important factor in making the sale. From a short run competitive standpoint, perhaps we should get the dealer so immersed with the facts of our product that he couldn't sell any other. However, in the long run he would become a less effective dealer. A number of dealers tell me they feel the need of sales training, but they aren't getting it. It is a fallacy to assume that sales education is designed only for major appliances; the smallest item needs it.

2. Dealer must be encouraged to cope with the consumer education movement.—The terms consumer movement and consumer education are now common in trade discussions. Retailers are setting up consumer relations committees; large stores are setting up consumer relations departments in addition to their advertising and sales promotions departments. Surveys indicate that consumer movement activities are centering on appli-

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Load Building with Kitchen Equipment

By R. C. McFadden

Sales Manager, Southern California Edison Company, Ltd., Los Angeles, Cal.

An address before the Sixth Annual Sales Conference, Edison Electric Institute, Chicago, March 21-24

IF we were concerning ourselves with the problem of selling energy to industry, we would naturally seek out those places in industry where work is being done, where energy in some form is being consumed, for it is in such places that our market is to be found and where our opportunity to build load exists.

In looking at the home for its load-building opportunities, we can examine it from the same viewpoint as would the industrial power engineer examine a manufacturing plant. We, naturally, will seek out that part of the home where the greatest amount of physical labor is performed and where the greatest amount of energy in one form or another is being consumed.

The kitchen is often referred to as the workshop of the home; in fact, it is more than a workshop, it is a manufacturing plant in miniature. Raw materials are brought in the back door, stored for use, processed, and converted into all forms of finished products suitable for home consumption, and delivered for use. Truly, a typical manufacturing plant, and as in any well-conducted manufacturing plant, the object is to make a fine product under working conditions within that factory which will make the workers both comfortable and happy. It is here, then, above all other rooms in the home, that the greatest opportunity to sell our product and to build load is to be found.

When the industrial engineer finally gets in to see his manufacturing plant prospect, his first step is to look around, size up the situation, and to determine the various applications of electric energy that can be made to the advantage of the plant owner. These applications may take the form of lighting, motor power, or of heating. We again make the same analysis in the kitchen and we do find the same practical uses. Let us examine the uses of electric energy which this kitchen electrical engineer has jotted down.

Truly, a rather imposing list of applications, many of which are either necessities or border upon that classification. It is only a matter of simple arithmetic to multiply the kilowatts offered in this kitchen by the total number of kitchens connected to any particular utility company's lines and figures of a rather staggering size are developed as to the potential load-building possibility. Also, by multiplying the number of kitchens by the estimated annual use of kilowatthours per kitchen, again a rather staggering figure of potential annual kilowatthour sales is developed.

MR. McFADDEN

Light	Hot Water	Mixers
Heating	Dishwashing	Juice Extractors
Cooling	Refuse Disposal	Toasters
Refrigeration	Time	Roasters
Cooking	Radio	Waffle Iron

Total connected load: 16.5 kilowatts.
Total annual kilowatthour consumption 6,400

Experience has shown us that we need not be too much concerned about this potential load in kilowatts that must be carried, for our good friend, "diversity," takes care of that problem. We find, then, a ready-made market that can absorb those kilowatthours at a price which is profitable to the utilities and at the same time well within the buying power of the homeowner. The capturing of this market naturally challenges the imagination of the salesman.

Competition of the keenest type is to be found in this home workshop because, with the exception of radio, every service which I have enumerated has been and still can be performed by some other agency than electric energy. However, the arguments are all on our side, and they are only too well known to you—saving of time and labor, convenience, safety, coolness, cleanliness, and economy. Armed with such an array of advantages, you would naturally assume that the kitchens of America would by this time be fully electrified, but such is not the case. Much of the equipment to perform the duties which I have mentioned has been with us for many years, yet we still find relatively low saturation figures. Obviously, then, the problem is not a simple one.

We still have competition, and it is of two kinds; namely, direct competition with other agencies for the services which we are offering to perform, and competition with other merchants for the consumer's buying dollar. We have the problem of the buying ability of our homeowners. In recent months we have seen trade magazines, convention addresses and other media proclaiming that it is the cost of equipment and not the electric rate structure that is retarding the sale of appliances. We recognize this condition but we should not let it get us down.

Above all, we have the problem of selling to our own industry as well as to our home owners, both existing and prospective, the need for adequate wiring. I feel that any discussion relating to home load-building that did not include reference to adequate wiring would be incomplete. At the present time we are all trying to crowd the traffic, comparable to a major four-lane highway, down a narrow, one-way street. It just can't be done. The position of our homeowners is somewhat like that of the natives of darkest Africa who are being

urged to buy automobiles. The natives gather around these new cars, admire their shining exterior and gorgeous interiors with their switches and controls, but back away with a shrug of their shoulders, saying to each other, "What can we do with them—there are no roads."

We have identically the same problem here. The manufacturers have, year by year, improved their appliances both in quality and in appearance. The industry holds exhibits and public showings of these devices; the public is attracted by their beauty and utilitarian value, but usually backs away with a shrug of the shoulders and says, "Yes, they are beautiful but I can't use them, for my home is not wired to permit their installation." The situation is well expressed by Dr. Woellner, a California lecturer, who says there are far more waffle irons than waffles.

Gentlemen, the highway into the home for the things which you and I have to sell is represented by two or three small copper wires; and in the homes by switching capacity and by circuit and outlet capacity to make available the full use of the energy which flows over these small copper wires. Copper is the only means at present which makes it possible for us to deliver and for the homeowner to use our kilowatthours and the devices of the manufacturer. Therefore, our basic problem is to get built into our homes more copper in the form of larger conductors and more of them. Under present conditions it is the exception rather than the rule for the homeowner or builder to be prevailed upon to follow our suggestions, largely because of cost, not because copper is expensive, but because wiring codes require so many non-essentials. When people pay $100.00 for a wiring job, little do they realize that they are buying only $2.00 worth of copper. I maintain that adequate wiring is the key of home electrification and I think that the interest of the entire industry could well be focused on that subject alone for some time, almost to the exclusion of everything else, and I believe that by so doing our load-building problems would be largely solved.

You hear on all sides price criticism —ranges are too high, water heaters are too high—maybe they are, but in a large measure, volume controls price and an electric range at $50.00 is no bargain if you can't use it.

I know that I have not enumerated any new problems to ponder over. All of the things which I have said are recognized by the industry at large and I am fully aware that the leaders of our industry are continually struggling with their solution.

In the attempt to solve these sales obstacles, all forms of plans have been tried, discarded, and tried again, and even today with much of our accumulated experience behind us, no one "best method" has seemed to come to the surface. One of the functions and benefits of such a meeting as is here assembled is to lay before us all, plans now in effect so that we may have the benefit of the newest ideas and to enable us to sift from those plans those ideas which we feel can be successfully applied in our particular territory. These plans are invariably the result of "cut and try" methods and are in a measure successful or they would not be in use. I do not claim that the plan of the Southern California Edison Company for building our kitchen load is the best in the country, but it is meeting with some measure of success and with the thought that you may be interested in what we are doing, I shall briefly review some of our activities:

In our attack on this Kitchen Load Building sales problem, we are concentrating upon

1. Adequate wiring
2. The electric refrigerator
3. The electric range
4. The electric water heater
5. The electric roaster
6. Kitchen lighting.

Earlier in this paper, I gave a potentiality of 6400 kilowatthours per year for kitchen use. These five applications alone account for approximately 5600 kilowatthours per year, or 88 per cent of this total figure, and in the main represent those uses for which there is the greatest competition. To a large extent, if these can be sold, the remainder, we feel, will take care of themselves.

May I, for a moment, return to the analogy with which this paper was opened. Let us compare opportunities for load-building in the kitchen with some of those prospects which arouse the interest of industrial salesmen. I have in mind a neighborhood garage and repair shop with a floor area of 2100 sq. ft. In this, we sell some fractional horsepower motors and general lighting which will yield an annual revenue of, let us say, $100. Nearby is a small foundry with an area of 3200 sq. ft. where we sell power for an overhead crane, a grinder and a tumbler, together with incidental lighting. The total revenue again would be about $100 a year. Not far away is a warehouse with 5000 sq. ft. of floor space built for the wholesale storage of garden furniture. This would use lighting in the aisles and in the office and also would yield about $100 annually. No sales manager would allow his men to overlook three prospects such as these.

The kitchen in the average home is seldom larger than 150 sq. ft. of floor space. Contrast this 150 sq. ft. with the garage having 2100, the foundry with 3200 and the warehouse with 5000 and then consider the 6400 kilowatthours annual consumption in the kitchen I am discussing. This is a use of 42 kilowatthours per sq. ft. and at a rate of 2c per kilowatthour, which probably would prevail in such circumstances, the annual electrical revenue would be $128, or 85c per sq. ft. Compare this with the garage which will yield 5c per sq. ft. and the foundry at 3c per sq. ft., and the warehouse at 2c per sq. ft. It is my contention that the kitchen deserves at least as much sales promotion effort as we bring to bear on prospects in the industrial field.

In our promotion plans, we recognize first of all that the good-will and cooperation of our dealers is absolutely essential, and they have been very fully considered. Early this year dealer meetings were held throughout our territory and all of our plans were carefully outlined to them. We feel it most essential to do this. Many well conceived programs have misfired through lack of proper understanding, due in most cases, to lack of proper explanation.

Adequate Wiring

I have already indicated that my company is greatly interested in adequate wiring. Our sales department always has been interested, and we have now secured management interest also to the extent that we are cleaning our own house of many of our own rigid conduit restrictive conditions. We are taking a more active interest in the type of electrical ordinances which are in effect throughout our territory. We are endeavoring to have changes written into these to make possible the use of approved, lower cost materials and methods. Meetings with architects and builders are being scheduled, fully explaining this adequate wiring program; in fact, just this month a meeting was held in Los Angeles at which the architects of Los Angeles were our dinner guests.

My company employs a staff of men whose sole duty is to sell the adequate wiring idea to builders and homeowners.

While this direct selling method works, yet it merely scratches the surface. Only 1000 homes out of a total of the 20,000 new homes built in our territory qualified for adequate wiring certificates last year, indicating that only a scratching operation is going on. At the same time, it is of interest to note that approximately 90 per cent of these 1000 homes installed electric ranges. I still insist that the key to our home load-building endeavor lies in adequate wiring and from here on, the Southern California Edison Company will direct more and more of its sales attention to that problem. We expect to have at least 2000 homes qualify for adequate wiring certificates this year.

Electric Refrigeration

About three years ago, predictions were being made that in 1939 or not later than 1940, we would see the saturation point in sales of domestic refrigerators and upon that date sales would be largely limited to replacements and to new homes. In the Southern California Edison Company we were not prepared to accept this decision, but we did realize that some change in sales strategy would be necessary as our list of obvious prospects dwindled.

We decided to undertake a rough census of our consumers to determine how many were without mechanical refrigeration. This was done by our meter-readers, who were able to report with some degree of accuracy upon approximately 60,000 who were using ice or were without any type of refrigeration service.

Before inaugurating a major campaign, 500 cards were selected at random and the prospects interviewed to determine their attitude toward electrical refrigeration. This trial campaign convinced us that we were on the right track.

We then invited all the refrigerator distributors to a meeting in our office where the method for getting these cards was explained and the distributors were asked if they would care to use these cards to form a prospect file as a basis for a sales campaign. It was thoroughly understood that cards which were not canvassed by salesmen within a specified time would be returned and given out to some other distributor. The distributors were most enthusiastic about our plan and immediately went to work on the cards. These were allocated so that each distributor had his fair portion of the total. To date, the cards have developed about 15 per cent prospects and 5 per cent actual sales.

Electric Ranges

Previous to 1939, we were furnishing free range wiring. This practice has now been abandoned. Ranges are being quoted on an installed basis; however, by agreement with all dealers, $32.50 is being added to the list price, this representing the average installation cost in our territory.

While we maintain a range sales staff, we are, at the same time, underwriting all dealer sales contracts, these contracts being accepted by my company without recourse upon the dealer. This policy is of great benefit to the dealers, and is genuinely appreciated.

We find that with electric ranges we have several distinct consumer sales problems:

1st: The sale of ranges in new homes and in homes never before using electric ranges.

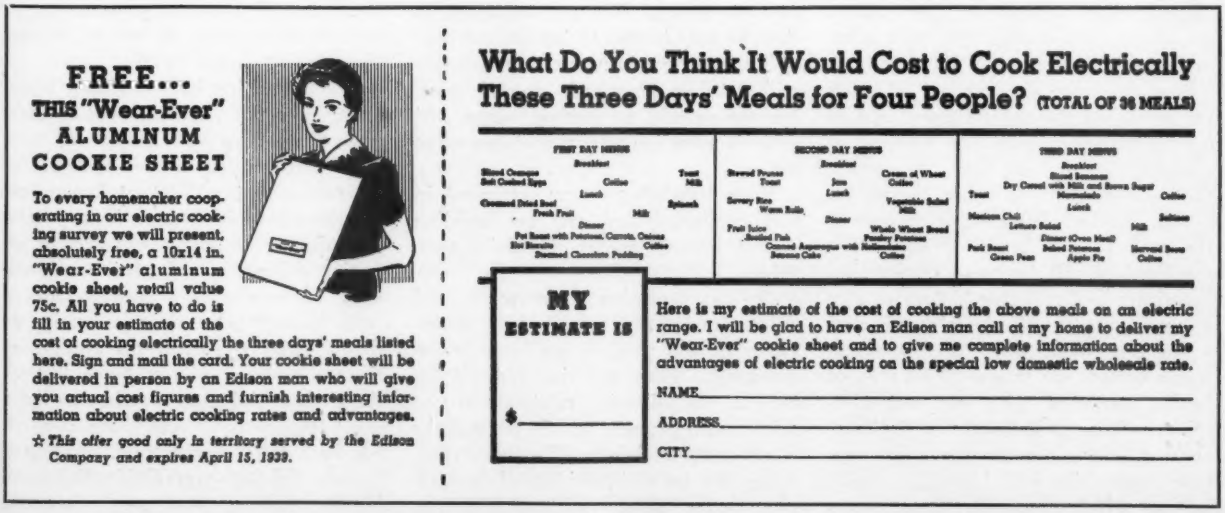
2nd: Restoration of range service in homes from which electric ranges have been removed.

3rd: The replacement of the obsolete range.

We are confining our direct sales efforts mainly to the last two groups, leaving the new home and the new user, generally, to the dealer. Our interest in the second and third groups is obvious. Our investment to serve has been made and it must be protected. It is with the obsolete range group that our competition is making its heavy inroads upon us. The protection of this business requires the expenditure of money for trade-in purposes. Where money is to be expended, it must be our money, as the dealer is in no position to make such expenditures.

The range price has always been a sales problem and we think that in a measure it has been partially solved by the development and local manufacture of a new type of built-in range that sells for approximately $100.00. It is particularly adapted to the new streamline kitchen which is so much in vogue at the present time. The feature of this range lies in the fact that the surface burners and oven are entirely separate units that can be installed to suit the homeowner's fancy.

We realize that with our change in free wiring policy that we have cut out for ourselves a real job in attempting to duplicate our 1938 sales. Our present range saturation is approximately 9 per cent. A feature of our range campaign may be of interest to you. As an aid in developing prospects, we began send-


FREE...
THIS "Wear-Ever" ALUMINUM COOKIE SHEET
To every homemaker cooperating in our electric cooking survey we will present, absolutely free, a 10x14 in. "Wear-Ever" aluminum cookie sheet, retail value 75c. All you have to do is fill in your estimate of the cost of cooking electrically the three days' meals listed here. Sign and mail the card. Your cookie sheet will be delivered in person by an Edison man who will give you actual cost figures and furnish interesting information about electric cooking rates and advantages.
☆ This offer good only in territory served by the Edison Company and expires April 15, 1939.
What Do You Think It Would Cost to Cook Electrically These Three Days' Meals for Four People? (TOTAL OF 36 MEALS)
FIRST DAY MENUS
SECOND DAY MENUS
THIRD DAY MENUS
MY ESTIMATE IS
$_____
Here is my estimate of the cost of cooking the above meals on an electric range. I will be glad to have an Edison man call at my home to deliver my "Wear-Ever" cookie sheet and to give me complete information about the advantages of electric cooking on the special low domestic wholesale rate.
NAME_____
ADDRESS_____
CITY_____

"We began to send this post card with our monthly publication. We had to stop. Returns have swamped us."

ing out a post-card with our little magazine, "Electrical Times," this card going only to non-range users. On this card is printed a menu for three days' meals, for four people. It is reproduced on the preceding page.

The sending of this card was tied in with advertising featuring the Sheriff of Los Angeles County sealing and unsealing the meter used in the actual determination of the kilowatthours used in this cooking operation.

I said that we began to send out these postcards with our monthly publication. We had to stop. Returns have swamped us. We ran out of cookie sheets and man-power. It is too early yet to give you figures on actual sales results, but if what has happened at the start is any indication of final results, this method of getting prospects will be the most fruitful we have ever tried.

Water Heaters

We think that electric water heating when properly sold offers one of the most desirable of kitchen loads, but I want to emphasize that it must be properly sold and when I say "properly sold" I mean from the standpoint of both the utility and the consumer. From the utility standpoint, the kilowatt demand must not be abnormal and the load factor good for we all recognize that relatively low rates are essential if volume is to be obtained, and to grant low rates, cost to serve must be kept as low as possible.

From the consumer standpoint, the hot water service furnished must be as good and as dependable—if not more so—than from any other method available. We think we have fulfilled these requirements in the type of heaters being offered to our consumers. Our heaters are of the two-element type with heating elements limited to 25 watts per gallon on the lower element and 50 watts per gallon on the upper element and so interlocked that only one element is operating at any one time. Normally, the lower element, of course, carries the heating burden. We then fit the size of the tank to the family needs. These specifications call for more storage, but experience indicates that hot water adequacy is present. We have a rate with a one cent block which applies where water heaters are in use. This type of heater, combined with one cent electricity, places us definitely in the competitive field in our territory where we have competition with high B.t.u. natural gas which practically blankets our entire service area.

We have the same consumer sales problem as with electric ranges and we are endeavoring to eliminate as rapidly as possible the obsolete and inefficient heaters and to restore service to homes from which water heaters have been removed. Our present water heater saturation is only 4 per cent. It is anticipated that at least 2400 new heaters will be sold this year. The same salesmen who sell our ranges, of course, also sell our water heaters, and as with ranges, water heaters are quoted only, with wiring added to the list price. Both our dealers and our salesmen quote on the same basis. Also as with ranges, we are underwriting dealer paper without recourse upon the dealer and sales contracts which may be written for as long as three years.

Electric Roasters

We are interested in the electric roaster for many reasons. Because it is a new appliance that has the ability to perform many cooking operations in a highly satisfactory manner, it is receiving a high degree of consumer acceptance. Those who buy them like them—and more important to us, use them. We think that we are conservative when we establish for these appliances a gross annual revenue value of $6.00.

We are interested in them as a stepping stone to an electric range. Most of the sales in our territory are going into homes of non-range users, many of whom cannot, because of their economic condition, afford to buy an electric range. These roasters, because of their relatively low cost are making it possible for such people to get a taste of the advantages of cooking electrically, and as a result place them squarely in the range prospect group. We are interested in them because it costs us but little to furnish service for them, yet three roasters will produce as much annual gross revenue as will an electric range, and what is more important, probably more net.

Very definitely, we are interested in this appliance, and we are building around roasters one of our major campaigns.

On our campaign we ourselves will sell one make only, but all of the manufacturers and dealers are actively cooperating. They will be sold on the basis of the following minimum terms: $3.00 down payment; $2.50 per month; $3.00 carrying charge; 12 months' time. Again, we are underwriting all cooperative dealer paper, without recourse. However, on all sales which we do finance, we are insisting that the table accompany the roasters. We don't want these roasters to become shelf ornaments and feel that when sold with the table they will be used more frequently.

Our advertising, which will employ practically all forms of media, will show the five makes distributed in our territory and will all carry the "See your Dealer" slogan. Arrangements have been made with all dealers whereby a pair of kitchen food tongs will be given as a premium to anyone who will come in to either our or the dealer's store with a copy of the roaster advertisement and listen to an explanation of the roaster feature.

Our own sales will be made largely by other than our regular sales staff. We have found by experience that approximately 10 per cent of our non-selling employees can and will sell if given an opportunity. An Edison Employee Sales Club is being formed from this 10 per cent group. Sales instruction will be given and each one will be required to learn how to bake a cake before doing any selling. We will pay them 75c. for each demonstration made and in addition 10 per cent commission on sales. We expect that in excess of 5000 roasters will be sold as a result of this campaign.

Kitchen Lighting

Lighting has always been a basic load-building activity and the experience of the past few years has demonstrated that there seems to be no such thing as lighting saturation. In industrial plants, in commercial establishments, in our public institutions and on our streets and highways, lighting sales opportunities abound, and to the above we have added the home. For a number of years we have been carrying on an active sales campaign on home lighting.

We are selling home lighting equipment, including a kitchen lighting unit; in fact, we have sold 120,000 of these units, representing an average gain of 90 watts per unit. We no longer permit the risk of inadequate factory lighting injuring the employee's eyes or affecting the quality or quantity of products. If we can be that thoughtful of paid factory help, most certainly we should stop to consider the eyesight of those who work in our home factory, the kitchen, and make certain that lighting adequacy is present there also. It has been fully demonstrated that good factory lighting pays dividends. Good kitchen lighting also pays dividends.

(Continued on page 208)

Fitting Advertising into the Merchandising Plan

By J. R. Pershall

Advertising and Merchandise Sales Manager, Public Service Company of Northern Illinois, Chicago, Ill.

An address before the Sixth Annual Sales Conference, Edison Electric Institute, Chicago, March 21-24

SOME months ago, Walter Winchell carried in his column a very interesting definition for "a wife." This definition struck me as also being somewhat descriptive of the relationship between the advertising and the merchandising manager in an operating utility company. Mr. Winchell said that a wife is a person who sticks by you through all the troubles you wouldn't have had if you hadn't married her.

For the purposes of this discussion, it doesn't much matter whether, in times of stress and strain, it is the advertising man who sticks by the merchandising manager or vice versa. I am attempting to make a hero out of neither one. The point is that there must be a sort of "sickness and health" partnership between these two before any real good can be accomplished. Call it a wedding of minds, if you like; call it something high-flown like "the establishment of common objectives," if you like that better. But, however you look at it, my golden text for this little sermon is that merchandising and advertising in our business, while distinctly not the same thing, must necessarily row side by side in the same boat.

Some of you may be mildly interested in why I, essentially an advertising person, should come here and make a speech on "Fitting Advertising into the Merchandising Program." There are two reasons: one is that Mr. Greenwood asked me to do it; the other entails a brief bit of history, which I shall now recite as painlessly as possible.

For something over 12 years my work had been distinctly advertising. Our office had dealt with advertising matters only —a distinction which must be made clear. We had nothing officially to do with, and shouldered no responsibility for, any of the selling or operating policies beyond our job of merely presenting those policies as clearly and concisely as possible to the public. We were purely an advertising and publicity department. Of course, in a business largely composed of engineers, accountants, and

MR. PERSHALL

financiers, advertising people are always considered a bit queer—and, being queer, we were often called in to work out the occasional job around the business which required a bit of highly artistic discrimination. Our office was supposed to be the company's last word on all matters of beauty and culture—such as the lettering on cashiers' cages, the selecting of frames for pictures of the gas works which hung in customers' hall, the design of the meter-readers' uniforms, and the typography of the company's rate schedules to be printed on the backs of customers' bills. All this, you understand, purely in an advisory capacity.

It really wasn't a bad position to be in. It placed a kind of authoritative benediction on a great many things we were guessing about. It broadened the advertising humdrum into a kind of an adventure in commercial aesthetics. I admit that I rather cultivated the act. I stood off at a distance and squinted my eyes, as I had seen real artists do, at the color scheme of a retail display. I had our advertising layout man make extensive and highly ornamental sketches for everything about the system, from the lettering on line trucks to the decorations for the Christmas party. As I say, we of the advertising office rather enjoyed it.

And, during all those years, our point of view about the advertising itself was very professional. We wrote, designed, and placed the advertising strictly in accordance with sales promotion schedules of the merchandising manager. Although the necessity of deadlines made us work very closely with the promotion people, we executed their campaigns, produced what they, not us, thought would sell, released it when they wanted it, and occasionally stayed within our budget. Being "highly professional advertising people," we took no responsibility for the economics of the merchandising, nor the value to the company of objectives involved in the advertising. If the ads met the merchandise department's schedule, if they looked respectable, and made sense, we had finished our job. If it developed that the sales offer was ill-timed, that inappropriate appliances were advertised, from a load-building standpoint, that we were giving away our shirts to make a sale, that we were ignoring or discouraging dealers—all these were griefs, not of the advertising department, but of the merchandising plan, if any. We took, in other words, no responsibility for ultimate success—only for the technical quality of the advertising itself, piece by piece. Selling was one thing—advertising another.

But, about two years ago something happened. For some reason known only to God, they placed the responsibility for merchandise promotion in our hands. Quietly, and without warning, the planning for domestic sales, the marketing, the pricing, the campaigning, the whole works for making the advertising pay—was dropped in the lap of what was heretofore the advertising office. It was something like saying to the advertising department—"You buttered your bread, now lie in it."

From that dark day onward we no longer had the vindictive pleasure of

blaming, for instance, a gas range campaign which had been a flop on the merchandise sales department. We are now in the distinctly unenviable position of being unable to "pass the buck" for unsuccessful selling methods or merchandising ideas on to anyone. We cannot complain about the lack of a merchandising plan, because if it is lacking, or late, or lousy, it is because we made it so.

I do not mean to say that this alliance of responsibility for successful merchandising should not always be shared by advertising. On the contrary, I realize that there is nothing new in it—that it is the practice in a great many companies and that it makes for a logical and coherent organization in utility operation. Many selling organizations have heard of no other way of doing business—and rightly so. Because, after all, as everyone agrees and loves to make speeches on—advertising which does not sell is not advertising at all. My only reason for mentioning our experience is that such a consolidation of activities is usually a slower process, and usually it is the advertising which is placed under the administrative thumb, so to speak, of the merchandising.

Furthermore, please do not get this confused with a success story. I think that the management of our company simply felt that they weren't getting as much work out of the advertising department as they should—and this seemed to be a cheap way out.

But in the past two years since ours has been the joint responsibility for sales promotion and advertising, we have come more and more to realize the necessity for careful and very thorough planning of the merchandise program in advance. And it is the early laying out of specific promotion activities far ahead of their actual inauguration that I should like to emphasize as a necessary groundwork for coherent sales and advertising operations in a modern combination utility.

Please let me make it plain that I do not consider this a new conception—this merchandise planning in advance of advertising—I know that many companies have adopted the principle years ago. I also know that many companies attempt it with mediocre success, and I dare say there are companies represented in this meeting who think it a lot of unnecessary hullabaloo about a theory that any good merchandising man knows before he starts out. But none of these points of view affect the sincerity with which I believe in it. Having looked at the matter from both the standpoint of the advertising and the merchandising man, I am honestly impressed with the necessity of this procedure.

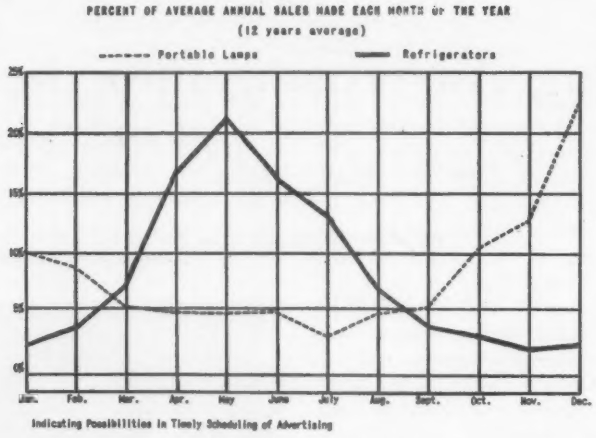


Fig. 1—Experience chart indicating relative sales velocity to be expected each month from appliances

I wonder if I have made absolutely clear just what I mean in a very practical way by planning the merchandising in advance. What I mean is that I think that before Jan. 1 of every year the advertising department of your company should be given a complete working plan for the next 12 months. This plan should include appliances that will be promoted each month, and the objective of each activity, both in terms of load revenue to the company and the corresponding appliance unit quota to produce that load. I think this working plan should be a sort of comprehensive scenario of the selling plot for the entire year, based on a month-by-month schedule of campaigns, with the expected accomplishment for each month or each campaign fully established and with the emphasis which each campaign deserves in relation to the other fully worked out. I think this whole plan should be previously approved by the management of the company with the understanding that if these quotas, and this revenue from appliances sold, is actually accomplished . . . that a satisfactory job will have been done, and that the blessings of Heaven will have been well earned.

I am afraid that I have made this advance promotional plan sound like an inflexible manifesto from which no merchandise department could deviate, lacking the elasticity which would accommodate changes in procedure made necessary by changing conditions of the market, newly introduced ideas or other worth while departures—such as perhaps even a bargain package—which may develop during the course of the year's business. I have in mind, of course, nothing of the sort. I have in mind a merchandising plan which establishes only important and consistent objectives; which anticipates, for instance, a selling season on ironing machines during, say March or April, and which announces in advance that advertising money and other promotional expenses will be needed for that campaign, but which establishes no prices, terms or details until the time for actual preparation of the details comes around—perhaps a few weeks before the campaign starts. The merchandising plan I am talking about simply lays out the work of the sales and advertising forces and gives both time to get ready, to budget for everything, to test certain features, to determine the best appeals. It forestalls the sporadic upsets caused by the enthusiastic young man with the bright idea that next week you should drop everything you are now doing and start something else for no good reason, except that no one can think of a reason why you shouldn't. A good, well thought-out selling plan with long-range objectives, of course, is the best reason in the world.

It seems to me that without such a plan, and again I think I know whereof I speak, the merchandising of a utility can become a pretty sketchy record of what looked like bright ideas at the moment. It can become a series of snap merchandising judgments, concocted under the pressure of desperation, or the pressure of some high-powered manufacturer's salesman, or even the pressure of some company official who has good intentions but is subject to sudden sales impulses, the sum of which makes sense to no one and leaves the salesmen wondering what the hell actually is going

on. The public may not know the difference, but too many short sales efforts are liable to thin out the emphasis on whatever you are trying to sell.

We think we have worked out a plan which, to some extent at least, accomplishes the purposes I have in mind, and I thought it might be interesting if I explained to you something of how this plan is built up; how it is used; and why we think it is rather important.

Our annual merchandise sales plan is usually at least a 40-page book. It is bound in a stiff cover, distributed to all sales managers in our system, to the entire supervisory personnel under their jurisdiction, as well as to everybody in the sales promotion and advertising departments. This distribution, itself, of the program at least enables us to all expect the same month-by-month policy and to prepare for identical campaigns, which we feel is worth while whether the campaigns are the best or not.

A typical page from this plan book shows the monthly quota of kilowatt-hour accomplishment that we are aiming at this year, including the efforts of dealers with whom we are cooperating in many ways. This overall quota sheet takes into account the varying selling seasons which each month of the year represents. These ratios have been determined from some experience studies that we have accumulated for several years and which seem to be fairly accurate for this purpose.

Fig. 1 shows one of the experience charts which are used in arriving at relative sales velocity to be expected each month from each appliance. Take, for instance, two load-building appliances obviously with widely different annual peaks—lamps and refrigerators. For a period of twelve years we have found the best season for refrigerators to be around May 1 and for portable lamps during the latter part of the year. Of course, there is no news in this to you. But these curves accurately reflect the summation of twelve years' actual sales records of our company. They have served, on a number of occasions, to bolster our contention that temporary off-season campaigns cannot, economically, change public buying habits and the best time of the year to advertise certain appliances is the season when people buy them most readily. In other words, for a given amount of promotional money, you can raise peaks higher than you can fill valleys.

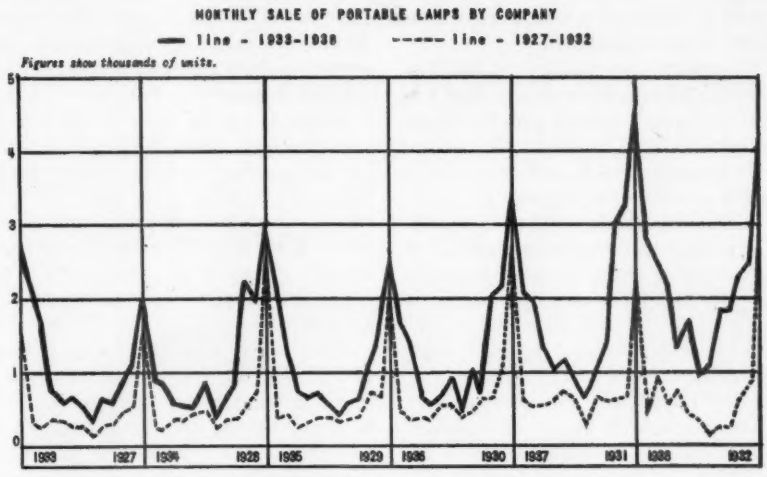


Fig. 2—Monthly lamp sales, 1927-1938

These conclusions in turn have been developed from studies, for instance, of a record of monthly lamp sales since 1927 (Fig. 2). The two curves together represent a continuous record from 1927 to 1938, but the period from 1932 on is shown in a heavy line and placed over the earlier period (broken line) to show the difference. The broken line curve shows that from 1927 to 1932 our peaks in the latter part of the year, as summarized on the previous chart, were in December only. In the later years shown by the heavy line, properly-timed advertising and promotional efforts enabled us to broaden the favorable sales periods and widen the peaks out into adjoining months. Natural increases in business, of course, will account for the heightening of the peaks to some extent. But we feel that the broadening has largely been due to our own efforts.

The point I had in mind in showing these trend charts is to build up a sound basis, if possible, for showing another page from our annual Sales Promotional Plan (Fig. 3). Here is a more detailed quota, establishing both company and dealer objectives on some of the major appliances which must be accomplished to reach to the kilowatt-hour goals I showed on the first slide. Most of what I have been saying is only to indicate why we feel that these quotas are practical, that they make sense, and that they reflect a relationship to the sales possibilities of each month, and yet are high enough to be worth while incentives. Fig. 3 happens to show major electric appliances—we have others for gas appliances, minor appliances, lighting, and so forth.

Behind this detailed quota has gone considerable analysis of the best selling seasons for practically everything we have for sale. We have been able to study the effect of certain experiments in advertising and sales promotion and whatever good has come from them has been evaluated, and their rejection or in-

1939 MONTHLY ELECTRIC APPLIANCE QUOTAS

		Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
REFRIGERATORS	Company	45	100	200	300	350	300	250	125	80	40	40	45	1875
	Dealer	600	700	1600	2700	3000	2600	2000	1300	800	700	500	500	17000
	Total	645	800	1800	3000	3350	2900	2250	1425	880	740	540	545	18875
STORAGE WATER HEATERS	Company	18	15	42	55	82	78	54	42	44	30	24	16	500
	Dealer	10	10	25	40	50	40	35	35	55	35	25	15	375
	Total	28	25	67	95	132	118	89	77	99	65	49	31	875
RANGES	Company	25	25	50	70	80	100	100	100	60	60	60	45	775
	Dealer	20	20	50	80	70	100	90	90	60	60	60	45	725
	Total	45	45	100	150	150	200	190	190	120	120	120	90	1500
IRONERS	Company	30	35	95	50	45	45	45	65	55	55	55	50	625
	Dealer	42	42	84	56	56	70	56	70	42	56	70	56	700
	Total	72	77	179	106	101	115	101	135	97	111	125	106	1325
WASHERS	Company	75	175	255	135	105	105	90	120	135	150	105	90	1500
	Dealer	644	845	1173	1081	943	966	989	805	989	989	2104	1012	11500
	Total	719	940	1428	1216	1048	1071	1079	925	1124	1139	1209	1102	13000
LAMPS	Company	2500	2000	1600	1200	1100	1100	1100	1400	1800	2500	3000	4700	24000
	Dealer	2000	1850	1450	1350	1300	1300	1200	1400	1550	2550	2980	5600	24500
	Total	4500	3850	3050	2550	2400	2400	2300	2800	3350	5050	5980	10300	48500
DESK FANS	Company	0	0	0	0	75	375	900	150	0	0	0	0	1500
	Dealer	0	0	0	0	100	600	1500	300	0	0	0	0	2500
	Total	0	0	0	0	175	975	2400	450	0	0	0	0	4000
RADIOS	Company	Does not handle												
	Dealer	1400	1400	1400	1300	1300	1300	1300	1400	1700	2000	2500	3000	20000

Fig. 3—Appliance sales quota for 1939

clusion in the present selling plan is reflected in the quotas.

Now what happens after the merchandising program is completed? And why is it that what follows can be accomplished easier and more logically because of the completion of a somewhat comprehensive overall sales program?

In the first place, a detailed schedule of *immediate* merchandising plans can be worked out to cover the sales campaigns just ahead. These detailed campaigns can be completed with more accuracy and with less change because the whole series of campaigns, of which they are a part, is fully understood by all concerned.

These schedules cover the complete selling details of the various items—even including the commissions and bonuses of the sales force and the details of what our cooperation with dealers amounts to. They establish the period of the offer, the makes of appliances, whatever trade or special allowances we concoct and other details essential to the complete operation of a sales program so far as the sales managers and salesmen are concerned. The existence of a complete general 12-month plan is the thing which makes it possible for us to get out the detailed and more or less temporary selling schedules enough in advance for those interested to be adequately prepared. And we find that we get sufficient flexibility for changes, due to current conditions, by putting all our deviations from the general plan on these detailed schedules.

So much for the value of the general merchandising program to the sales department. Now, let me show you the value of the plan to the poor devils in the advertising department, the agency which is ready and willing to write and prepare the ads if they can find out far enough in advance what the ads are to attempt to sell.

After the merchandise plan is completed and has received the benediction of the front office on the objectives to be aimed at, the advertising department can then and there prepare the year's advertising budget with at least some degree of accuracy. Experience in the past will show the relative costs of certain sales accomplishments, and comparison of these figures with the quotas set in the forthcoming program would enable any advertising department to estimate fairly well what the year's total merchandise advertising should run.

But more important than the budget, it seems to me, is the fact that a schedule of the advertising work for the year can be planned, not in ultimate detail perhaps, but in enough time to enable your copy department or your agency to begin thinking in advance on future campaigns, future copy, future layouts, future direct-mail or radio schemes. My experience is that much of the difficulty with our advertisements, regardless of the medium, is that not enough people have had enough time to think about them, to work over them, to junk them and do them over. Deadlines have a habit of crowding out the best that any of us can do. The planned schedule of ads for a year in advance helps that situation. It seems to set deadlines ahead.

Fig. 4 is a working advertising schedule showing our current plan in general. While in many respects it is superficial, and it is frequently subject to change, it has been immensely valuable to us . . . and I know that it sets our deadlines ahead. You will notice that this chart has to do with electric merchandise only. Being also in the gas business in much of our area, we have another chart, in the same form as this, for our gas merchandise.

Like most companies, we do a great deal of advertising that is not charged directly . . . some, not even indirectly, to merchandise sales. For this type of miscellaneous advertising we have worked out still another schedule for a year's work. This schedule covers many, if not practically all, of our established

(*Continued on page* 198)

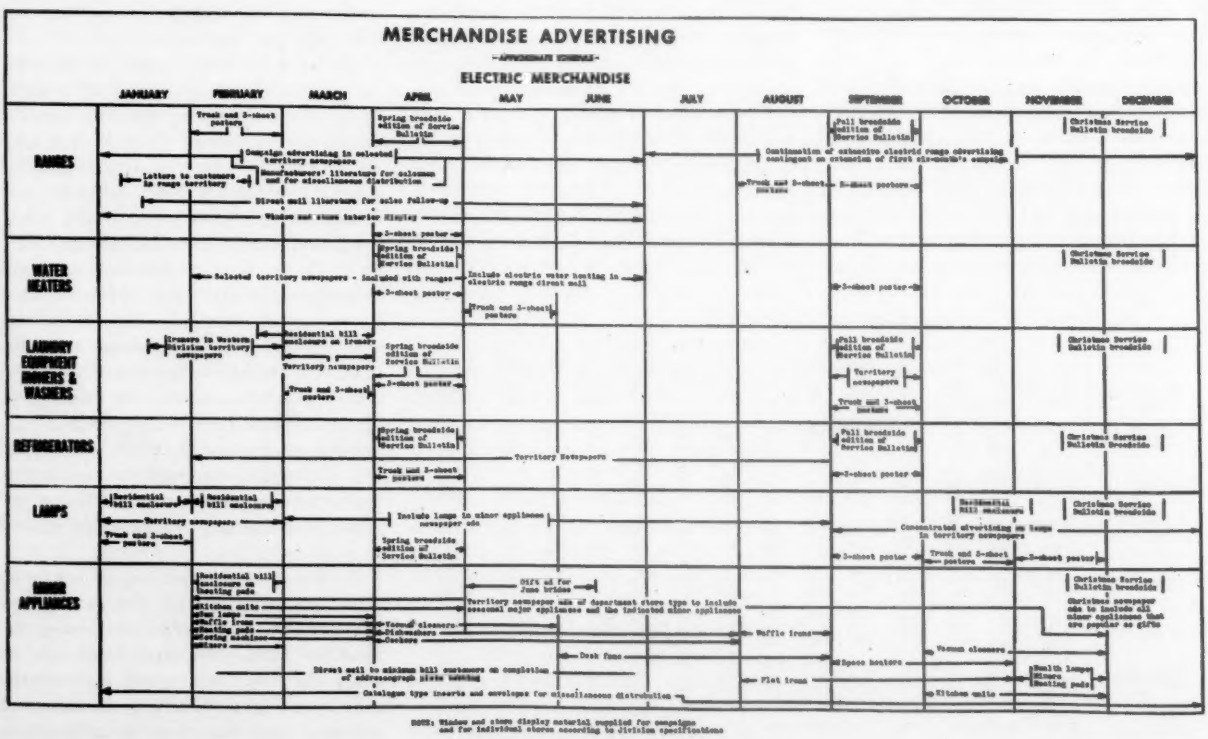


Fig. 4—One year's advertising schedule

The Electric Dollar Is On the Platinum Standard

By O. R. Doerr

Pacific Gas and Electric Co., San Francisco, Cal.

An address before the Sixth Annual Sales Conference, Edison Electric Institute, Chicago, March 21-24

WHEN speaking of "standards," the question is immediately raised as to a yardstick, or basis of comparison by which values can be established. One of the famous contributors to our industry, Lord Kelvin, long ago made this statement: "When you can measure what you are speaking about and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind." It is not possible to express in numbers the particular phase of this subject which seems so all-important to our business today.

I have in mind the human element involved in the task of selling electric service and appliances to 23,000,000 odd domestic customers. Evaluation of such an ever-changing factor, as you well know, does not lend itself readily to a cut and dried formula. However, much progress has been made, and is currently being made, in the field of psychology which throws new light on this important science.

Actually, measurement can be applied with some degree of accuracy to human beings and their actions and reactions, but there is need for more thought and research to convert this knowledge to practical use.

These remarks on a rather abstract topic may strike you as trite, and possibly somewhat elemental. That is probably just as well since there is a definite need for a more forthright and simple approach to the solution of many of our current problems. Possibly a little less faith in bizarre "stunts" and wistful "magic," and more attention to fundamentals and basic principles is the remedy which will cure some of our ills.

As a matter of fact, restoration of fundamentals is needed today in almost every activity that affects human life—governmental, social, religious, and economic. We have seen so many new fangled ideas and allegedly painless panaceas fail to live up to promises that we should be ready for a re-dedication of basic principles and sound practices.

MR. DOERR

In my humble opinion, there is *today* no problem in our industry (or any other for that matter) which transcends that one having to do with the relationship of business with its customers (and employees too), from which, for the most part, public opinion is formulated. The silent partner in our scheme of things—the Public—is King. This partner, which we are wont at times to consider inarticulate, owns us, buys our product, and finally exercises the right of *life* or *death* over us.

Under these circumstances we must be concerned with what our customers think, individually and in mass, and of the impression-creating processes at work which may affect their thought and actions.

Certainly, if our business has evolved through a series of epochs such as Engineering, Finance, and Sales, during which some one or more major obstacles impeded progress, we are now confronted with the all-important problem of human relations.

It is not my purpose to deal with this subject from an academic standpoint, except insofar as it is necessary to suggest how our fundamental selling procedure may be revised, or in some cases merely intensified, to help solve this problem.

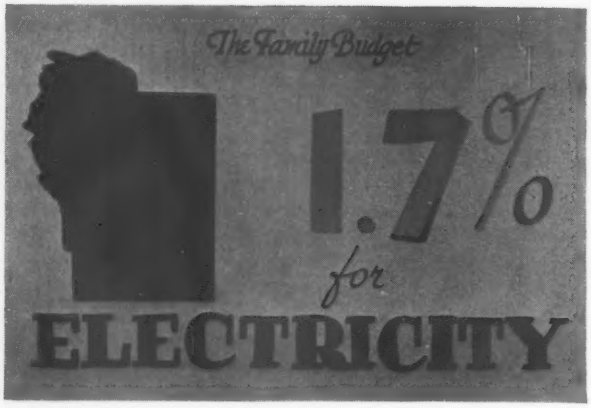
Definitely, this task of molding public opinion and rewinning and holding the confidence of the public cannot be divorced from our functions of load building, which, perforce, requires numerous and repeated contacts with customers. Unless sales interviews are made with a full understanding of the implications involved, maximum benefits will not accrue and irreparable damage may be done.

The future and very salvation of this industry is dependent upon the ability of utility people to learn more about some of the mental sciences. This is necessary in order that we may better understand and apply the important art of dealing with people. We have "done ourselves proud" in the mastery and application of knowledge based upon the physical sciences. We can build dams, power houses and transmission lines that are marvels of engineering skill; we can manufacture equipment and appliances that are almost human in their operation; and we can determine excellent rate structures, set up accurate accounting procedures, and scientifically organize other essential operations of our business based upon concrete facts and figures.

However, when we get away from these creations which are based on the physical sciences, and approach our more or less abstract problems, there is a tendency to abandon science and revert to "trial and error" methods. When we cease to deal with tangibles and are confronted with people and intangibles, all too frequently we find ourselves in a fog.

Don't misunderstand me. This is not a condition which plagues this industry alone. It is common to most industries at the present time.

There is, furthermore, some excuse for this condition, for in dealing with the human element we are concerned with an ever-changing factor. Present-day knowledge of the human brain, with its more than thirty billion separate cells and still unfathomed processes, leaves much to be learned. Nevertheless, as



the seat of the several senses, and of the emotional reactions which are brought into play in our dealings with customers, we should make use of the very considerable knowledge available. Such information constitutes all there is of a science on the subject.

We have been taught that man is wonderfully made and a thing of glory. At times we may be inclined to dispute this statement. Most of us will agree, however, that the thinking apparatus inside his skull is marvellously and delicately made, although many erroneous ideas are held concerning it.

For example, there seems to be a prevalent belief that mentally we are advancing at a tremendous rate. Actually, we learn slowly. People, generally speaking, are ponderous thinkers. An idea has to be "banged" at them incessantly if it is to become an accepted part of their conscious thinking.

This is worth remembering in connection with our educational responsibilities. When we search beneath the thin layer of civilization with which man is veneered, we find basic human nature little changed through the centuries.

It is merely repeating a platitude to say that the mainspring of all human action is the desire for satisfaction of needs or wants. Our customers' "needs" or "wants" are paramount to them and should be understood by us if we are to be successful in achieving the kind of public reaction we seek. Likewise, the method of discovering and arousing such reactions is important.

Since the beginning of time man has striven to better his lot in life. While his needs, essential to life, have always been few, his wants are myriad. Satisfaction of actual "needs" only, i.e., the essentials of life, permits of but a simple existence like that of an animal. Satisfaction of "wants" brings about that more idealistic condition which we are pleased to call our modern standard of living. The simple fact of the matter is that the average person's "wants" are to him more vital than his essential "Needs."

Perhaps there is a practical deduction to be drawn from the foregoing—one which we can make use of in our campaign for the public confidence our industry so greatly needs. It just so happens that we in this industry can bestow on the humblest citizen, at a cost within his means, many of the luxuries and semi-luxuries that he so fervently desires, i.e., comfort, conveniences, leisure time, pleasure, adequacy. Have we taken full advantage of this situation in influencing public opinion?

The "isms" and cure-alls that have swept the world in recent years can be traced to these simple human desires. People everywhere have been susceptible to the proffered hopes and promises of the better things in life. The most fertile field for these emotionally applied and accepted theories is the oft eulogized segment of our population described as the underprivileged one-third — those who allegedly are ill-fed, ill-housed, and ill-clothed. From this income class comes most of our low-use customers.

Fortunately, our industry can provide for this group, inexpensively, many of the better things of life. This should place us, if good selling is done, in an enviable position to secure their support and favor. If sometimes it is hard to find "cash in the till" returns for work in the low income customer brackets, it is well to bear in mind the customer relations by-product involved. Actually, our public relations problems rests largely with these customers.

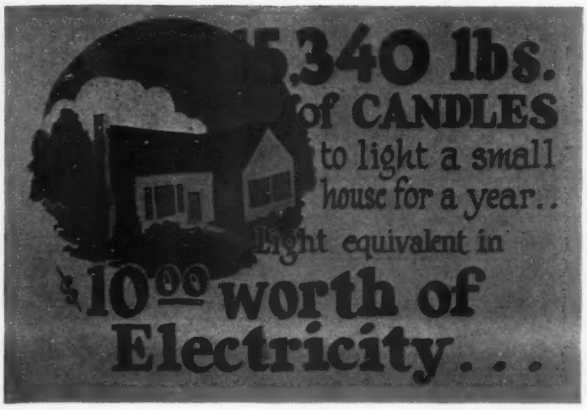
If too many of our customers hold "anti" opinions, do we excuse it with the rationalization that it is just a condition of the times? If so, bear this fact in mind. Just as the *Need* or *Want* supplies the motive power for human action —so does the *belief* or *knowledge* possessed by an individual decide the direction of his actions. These two things—customer "Wants" and "Beliefs"—must be considered together in dealing with the human problem.

The knowledge that each person possesses on a given subject is the result of an accumulation of ideas acquired from many sources. Analyzing this process, each idea is the result of a number of images or perceptions registered on the mental screen of the individual. It follows, therefore, that each person's knowledge, and incidentally his judgment on any subject, is sound or unsound, depending upon the accuracy of the various original impressions that made up each idea and the sum total of his knowledge on the subject.

This brings up the further question: How effective have we, as an industry, been in creating our share of the images that make up the ideas possessed by our customers? How accurately have we portrayed the true facts in the case? Third, if some misconceptions exist, what are we going to do about correcting faulty impressions or adding enough new positive impressions to over-balance the previous negative ones?

It's a job—of course it is, but we have a real story to tell, and in the telling of that story lies a partial solution of our public relations and sales problems. It is recognized, of course, that many factors are involved in our customer relations situation, but it is my purpose to confine consideration here to those strictly sales angles which are important in the solution.

There is nothing new or unknown to you in the visual material next to be presented. It comprises simple facts that we should impress indelibly on the minds



of our customers. Bear in mind that while these facts are familiar—an old story to all of us in the business—they are not part of the conscious thinking of enough of our customers. Furthermore, we have an influx of new customers every year. Each decade about 25,000,000 young people reach adulthood and should receive information about our services and products.

Too many of our customers still think electricity is expensive, which means we have not made our story understood, or, if understood, it is not believed. If the facts we have to present were analyzed, understood, and believed by our customers, they could not help but have a higher appreciation of an industry which provides the extraordinary values to be had from electric services. Were these benefits enjoyed through actual experience—by use in the home—critics would be few and far between. The most satisfied customer is the one who enjoys complete, rather than minimum service.

The impressions to be made are the ones with the greatest self-interest appeal. These should be used, even though they may be old. Repetition, simplicity, examples, specificity is the prescription to bring about understanding and belief.

[Editor's Note: A series of 29 sides entitled "How Much U. V. [Use Value] In Your Sales Story" was here presented by Mr. Doerr. Due to space limitations only a few of the slides are reproduced. Mr. Doerr's comments on the slides follow.]

A breakdown of expenditures by the *average American family* emphasizes the *pittance* paid for electric serice with its innumerable advantages, as compared with other items in the budget.

Food for the family, takes one-third of the income.

Home and furnishing expenditures, including rent and miscellaneous household supplies, uses 22 per cent.

Clothing takes 17 per cent of income.

The automobile, movie and other recreational diversions exact from the budget another 11 per cent.

The druggist for medicinal supplies and the doctor get 3 per cent.

Social security demands 2 per cent.

Excluding several miscellaneous items, including savings, amounting in total to approximately 10 per cent, we come to one of the smallest expenditures in the budget, i.e., Electricity, 1.7 per cent. Here is an item, hardly the price of a good cigar, which, according to some haranguers, is "breaking the back" economically of the citizenry of this land.

In our normal selling jobs, when we are confronted with an obstacle, we have several methods of meeting and overcoming it. When we are faced with the high cost of electricity obstacle, usually presented in a rather vague and indefinite manner, do we let it go unanswered? To my way of thinking, allowing such statements to go by unchallenged is "assent by silence."

Should we not rise up in righteous indignation and disprove such contentions with facts and figures of which we have a plenty? I don't mean that we should get all "het up" and "wind up" in an argument. Put on the "salve" if you will—the "Yes—but" or what have you technique—but don't ignore the damaging misinformation.

Let us consider some of the individual services. (The cost of operation figures to be given are based on P. G. E. average domestic rates and the hours of operation data for various appliances are based on surveys in P. G. E. territory.)

Every one uses light. What do customers call their light bill? Actually the average domestic customer pays only 5c. per day for all the light used if the other uses are deducted. Isn't that a bargain as a substitute for old "Sol"—to extend daylight several hours into the night?

Suppose you had to light your home with candles. It would require over seven tons (15,340 lbs.) to produce the lumen output equivalent of even a poorly lighted home like this one; 15,340 pounds of candles at only 5c. a pound would cost $767.00.

Almost every customer, including a large per cent of the low use customers, has a radio. Think of the "Use Values" here—the world's greatest artists on call for command performances, drama, educational opportunities, programs of relaxing fun—1400 hours of it per year for only $4.48—.35½c.

per month—only a little more than a penny a day.

Cleaning the floors and upholstery in the homes is another bargain in electricity. It would take a maid a month at a cost of about $50.00 with a broom and pan to do the year's cleaning in a home. The vacuum cleaner will do it for 2c. a week or $1.07 per year.

The clothes washing story is no different. A ton of wash per year can be put through the electric washer at a current consumption of only $1.17—2c. per week.

Even the well established advantages of the electric hand iron have been improved upon for the modern housewife. Instead of lifting 3000 lbs. in ironing the weekly wash, the electric iron for 11c. a week will do away with this tiresome chore.

The refrigerator, of all appliances, holds to its unique story. It pays for itself, then pays the user. Adding in the cost of electricity, the customer loses money if the home is operated without one.

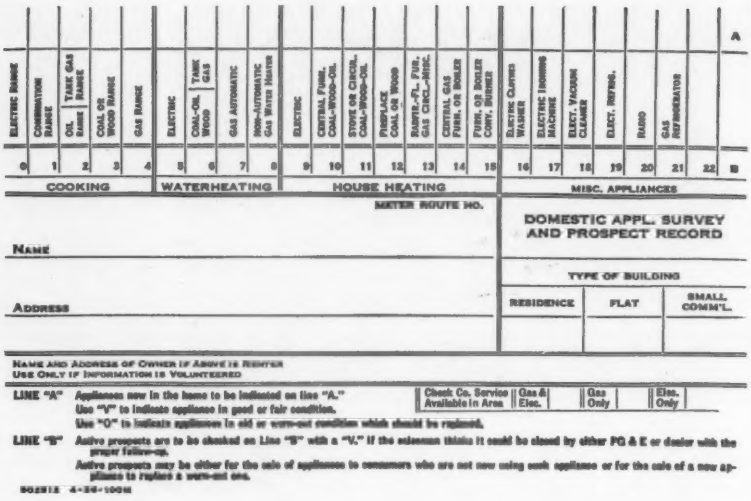
Such services as electric time are almost complimentary—89c. a year. Nevertheless, electric clocks build good will and get over the story of dependability, continuous service.

A new boon to the home is the dishwasher. This is a service that has appeal plus to the customer. If we as utility people can forget the "measly" 2½c. per week or $1.28 annual revenue, and concentrate on the "Use Values" and downright customer satisfaction to be had from this device, we will recognize in the dishwasher a *natural* whose by-product as a good will builder is worth more than the little revenue involved.

Another service with real sex appeal, and also with the load building and revenue possibilities that utility people love, is electric cookery. At less than 1c. per person per meal the old bug-a-boo of operating cost is fast disappearing and this "heart" of the electric home is coming into its own.

Our low income bracket customers are not yet able, generally, to afford automatic electric water heating service. There are, however, literally millions of average and above-average income families now using inferior, obsolete water heating systems, who should be interested in this convenience at the reasonable operating costs now available almost everywhere.

When we find families in all economic levels supporting automobiles—second-hand though some of them may be—we should stop to consider why some of our electrical services, inexpensive as they are, are not looked upon as a necessity, as is individualized transportation.


A
ELECTRIC RANGE
COMBINATION RANGE
OIL RANGE
TANK GAS RANGE
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0 1 2 3 4
COOKING
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TANK GAS
GAS AUTOMATIC
NON-AUTOMATIC Gas Water Heater
5 6 7 8
WATERHEATING
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CENTRAL FURN. COAL-WOOD-OIL
STOVE OR CENTRAL COAL-WOOD-OIL
FIREPLACE COAL OR WOOD
RADIATOR-FL. FUR. GAS CIRC.-MISC.
CENTRAL GAS FURN. OR BOILER
FURN. OR BOILER CONV. BURNER
9 10 11 12 13 14 15
HOUSE HEATING
ELECTRIC CLOTHES WASHER
ELECTRIC IRONING MACHINE
ELECT. VACUUM CLEANER
ELECT. REFRIG.
RADIO
GAS REFRIGERATOR
16 17 18 19 20 21 22 B
MISC. APPLIANCES
METER ROUTE NO.
NAME
ADDRESS
DOMESTIC APPL. SURVEY AND PROSPECT RECORD
TYPE OF BUILDING
RESIDENCE
FLAT
SMALL COMM'L.
NAME AND ADDRESS OF OWNER IF ABOVE IS RENTER
USE ONLY IF INFORMATION IS VOLUNTEERED
LINE "A" Appliances now in the home to be indicated on line "A." Use "V" to indicate appliance in good or fair condition. Use "O" to indicate appliances in old or worn-out condition which should be replaced.
Check Co. Service Available in Area | Gas & Elec. | Gas Only | Elec. Only
LINE "B" Active prospects are to be checked on Line "B" with a "V." If the salesman thinks it could be closed by either PG & E or dealer with the proper follow-up.
Active prospects may be either for the sale of appliances to consumers who are not now using such appliance or for the sale of a new appliance to replace a worn-out one.
SOURCE 4-26-1000M

For the cost of driving the most economical automobile one mile, 2½c., the average family can enjoy breakfast cooked electrically, with comfort and convenience fit for a king.

These are some of the "Use Value" selling points we must impress upon our customers.

Perhaps not this particular story, but something along these lines that is more specific and pertinent, would register with your customers. In this presentation, for purposes of illustration, far too much ground has been covered for clarity and complete understanding. There is a limit to the comprehension of the average human mind. It is better to be understood on one point than to create a hazy impression on many. Thus, it is vital to know which ideas to present and the order and manner of presentation.

The best way to determine the extent and nature of the selling ammunition to be used is to find out what your customers are thinking now; what they are using; how their leanings go; and as many as possible of the other facts pertinent to the matter. In other words, conduct the necessary research to permit consideration objectively of the problems involved.

There are several methods by which facts as to customer *wants* or *needs* and their *beliefs* can be uncovered. The most simple and accurate procedure is by asking questions of them—by means of special investigations. Fortunately, people just normally like to talk about the things they want, and, therefore, special investigations, if carefully formulated and executed, do bring forth the desired information, and with generally favorable reactions.

The sample forms I shall quickly review are some examples of such research conducted in P. G. E. territory of service. They are not offered as examples of perfection, but merely as ideas of some tangible effort in this direction. Much room for improvement remains. These forms include: Domestic appliance survey card; domestic appliance usage survey; post card survey of appliance purchasers; major appliance research questionnaire.

Some conclusions might well be drawn from the foregoing:

1. Our industry has a story that touches the mainspring of human motivation;

(*Continued on page* 208)

Will you please return the attached Reply Card and tell us if your recent purchase of

ELECTRIC RANGE

has been entirely satisfactory. By so doing you will help us fulfill a desire to give complete and satisfactory service to our customers. Thank you.

PACIFIC GAS AND ELECTRIC CO.

PLEASE FILL OUT, DETACH AND MAIL THIS CARD

1. Are you pleased with the appliance? Yes No
2. Were your dealings with our sales representatives entirely satisfactory? Yes No
3. Are you inclined to recommend the appliance to your friends? Yes No

Name .....

Address .....

☐ City .....

Remarks or Suggestions .....

Some Public Health Aspects of Air Conditioning

By Albert Gayland Young, Ph.D., M.D.
Medical Director, Corey Hill Hospital, Brookline, Mass.

An address before the Sixth Annual Sales Conference, Edison Electric Institute, Chicago, March 21-24

WE can survive for weeks without food, for days without water, but for only a few minutes without air. Therefore, the *condition* of the atmosphere in which we live and the air we breathe is important to our comfort, body efficiency and health. We have made great advances in the fields of food and water purification, and much constructive effort has been exerted in the study of ventilation, but the latter is a more difficult problem. If we stop to consider that the air we breathe is also our surrounding media, we immediately recognize the difficulty of *purifying* the air.

It is relatively easy to cleanse, filter and protect the water used for the city water supply, but since we are surrounded by and live within the air we breathe, we must accept what comes to us, whether it be scented from the flowers of a nearby garden or from the local fertilizer plant. The outdoor air will purify itself given sufficient time, but if we are to exert any important effect upon it, we must do so by preventing its contamination.

Indoor air can be influenced by mechanical means and this has become known as "Air Conditioning." For many years these methods were used largely for deep mining and industrial processing but within the past decade their use has been greatly expanded to include human comfort and health. Today we expect air conditioning in theaters, public dining rooms, pullman cars, etc. The question arises—what influence will this "made to order" atmosphere have upon the public health? The public at large has conceded its comfort qualities but many people are not convinced that it is healthful.

In order to discuss this question we must consider the following facts: For purposes of respiration the air contains but one important element—oxygen. The complicating factors are the contaminating substances. For the average individual these consist of noxious odors, gases, particles of dust, carbon, etc. For some 10 per cent of the population (the hay fever and asthma patients) we must add pollen and other air-born excitants.

DR. YOUNG

Due to the great industrial expansion with its consequent increase in the urban population of the United States, the problem of air pollution has become a major factor in regard to public health. The problem can be attacked from two points, prevention of air pollution by factories, and cleansing the air before it is brought indoors. Until we develop more efficient methods for the combustion of oil and coal, our preventive measures can only be palliatives, unless we wish to further depress industry. However, when one considers that most of the urban population spends over 60 per cent of their time indoors, it is evident that proper cleansing and ventilation of indoor air is a constructive procedure. I do not believe that I am unduly apprehensive about this subject. Figures compiled by recognized scientists speak for this problem. Morris (*Refrigerating Engineering*, December, 1938) in speaking of air pollution by coal smoke says, "It is estimated that five per cent of coal goes into the air as unburned carbon. As affecting health, the quantity of silicate particles and sulphur compound gases going into the air are most important. In Chicago, coal runs about four and one-half per cent sulphur and it is estimated that one plant emits five hundred tons of sulphuric acid into the air every twenty-four hours." Besides acting as an irritant to the mucous membrane of the upper respiratory tract and lungs, this exerts a toxic action on the body generally, especially the liver and kidneys.

In 1925 the Health Department of Chicago made a study of dust fall in different parts of the city. In the loop district when the heaviest fall occurred it reached the amount of four hundred and sixty tons per square mile in the month of January. This is not peculiar to the city of Chicago since comparable findings were made for St. Louis, Pittsburgh and other industrial cities in the United States and the British Isles. This does not complete the picture of city air pollution. Various gases are constantly discharged into the atmosphere. Many of these gases in sufficient concentration are lethal. Carbon monoxide is one of the most common gases polluting the air. In heavy traffic the carbon monoxide concentration of the air reaches 1.7 parts in 10,000. Definite toxic symptoms occur in a concentration of 5 parts in 10,000.

These facts alone are sufficient to justify the conclusion that the outdoor air in urban centers is not "fresh air." When such air is brought indoors it is further contaminated by food and body odors. The moisture given off from the lungs and body increases the humidity, the air stratifies according to temperature and the inmates of the room complain that the "air is close." It is difficult to focus the attention and the head is usually too hot and the feet too cold. This is not conducive to good mental or physical health.

We must also consider that the air is the chief media through which we regulate body temperature. This regulation is effected by conduction and radiation, and by evaporation of moisture from the skin and lungs. We know that this is definitely influenced by the temperature, humidity and motion of the air. Of these three factors control of humidity is probably the most important to heat regulation. Moving air is very necessary for the sensation of "fresh air" and to increase evaporation. Thus it is evident that summer comfort cooling properly used is a good health measure. Mary

Grover, associate statistician of the U. S. Public Health Service, says that during a heat wave the death rate is increased four-fold. About one-fourth of the deaths are due to heat stroke, the rest are due to heart disease, cerebral hemorrhage, kidney disease and pneumonia. Here again we see evidence of the increased load placed on the heart and circulation and the lowering of body resistance due to high temperatures.

Without going into further detail I believe it is evident that washing and filtration of the air we breathe to exclude gases, dust, carbon and other foreign matter is in itself a healthful procedure which is rapidly becoming a necessity in urban areas. However, this is only part of the advantages air conditioning has to offer the public at large. By providing clean fresh moving air it overcomes stratification of the air in a room, decreases odors and thereby adds to our comfort which in itself is a good public health measure. Such treatment not only removes foreign bodies, irritating and toxic substances from the air, but decreases the bacterial content. This can be further reduced by exposing the air to ultra violet light. By controlling the humidity it is possible to provide the best *effective temperature* for the individual. Under these conditions the individual can perform physical and mental work with greater efficiency and less fatigue, while those at rest enjoy greater relaxation. A recent survey of employers shows that ninety-five per cent thought that air conditioned offices and factories increased efficiency; ninety-three per cent that it decreased fatigue and seventy-seven per cent that with it employees did more work. (*Boston Traveler,* Mar. 14, 1939.)

This brings up the subject of school room ventilation. Much has been written on this subject and but little agreement has been reached though most interested parties agree that it is universally bad. Certain facts are available: (1). Controlled humidity and moving air will reduce odors, air stratification and the "closeness" of the air within the room. If the relative humidity is maintained as high as 30 per cent in cold weather and as low as 50 per cent to 55 per cent in warm weather then an effective temperature can be obtained that is conducive to physical and mental comfort which means that the students near the windows will not freeze while those near the inside walls undergo the sensation of being in a Turkish bath. I am confident that much of our increase in upper respiratory infections among school children could be avoided by the application of air conditioning to school rooms. If air conditioning is good business for an employer why is it not good business for the public schools?

Exposure to extreme heat or cold is a recognized physiological hardship. The higher the humidity the less resistant the body becomes to temperature fluctuations. Rapid changes from hot to cold or vice versa are never well tolerated. It is therefore evident that if the indoor temperature, humidity and air velocity is maintained at a suitable *effective temperature* both summer and winter the inhabitants would not only enjoy greater comfort indoors but would encounter less exposure on going outdoors. This can only result in better health.

There is another value to air conditioning that I have not mentioned. It supplies proper ventilation without opening the windows. In fact it is most effective where double windows are used. As a consequence about ninety per cent of outdoor noise can be excluded. In cities and many towns most of our schools and practically all of our hotels, apartment houses and offices are located in the most noisy areas. Medical men and Public Health authorities have recognized, for years, that the constant clamor of the city constitutes a serious hardship on our nervous system. McCord, Teal and Witheridge (*Journal of the American Medical Association,* May 7, 1938) says, "In noisy industrial employments it is not unusual to find in those groups of workers below 30 years of age as many as 50 per cent with some degree of impaired hearing. This noise deafness constitutes the most serious and tangible of the ill noise effects, but there is in addition, a host of scarcely measurable injuries made evident by neuroses, loss of sleep, excessive fatigue, emotional disturbances and the like that jeopardize the complete well being of most persons, and in which noise may well play a part. . . . There is both practical and experimental evidence that noise has been responsible for impaired hearing, fatigue, neuroses, increased blood pressure and decreased working and mental efficiencies." In citing the literature they point out that various investigators have shown that dimunition of noise: increased the personal efficiency of loom weavers 7.5 per cent: tests ran on children and adults for their efficiency in addition and influence of various types of noise showed a reduction in working speed rather than accuracy: discontinuous loud mechanical noise is more disturbing than continuous noise of the same type: many other experiments showed a definite decrease in errors with consequent increase of efficiency among typists, packers, assembly workers, etc. Of particular interest is the work of Griswold on the efficiency of piece work employees in the Hartford office of the Aetna Life Insurance Company. By reducing the noise level 14.5 per cent the average efficiency of workers was increased 8.8 per cent. Typing errors were reduced 29 per cent and machine operators 52 per cent. *Employee turnover decreased 47 per cent and absenteeism 35.5 per cent.* Metabolism studies by Laird at Colgate University showed that 19 per cent less energy was consumed by typists when the noise was decreased 50 per cent to 60 per cent. Kennedy (*N. Y. State Medical Journal 36:* 1927, 1936) reported that a sharp loud noise increased intracranial pressure to four times normal and sudden noises increased the pulse rate and blood pressure and caused irregularities of heart beat. Many studies and recommendations have been made to decrease city noise. By the use of air conditioning it can be excluded. It will undoubtedly result in better work during the day and better rest at night.

Perhaps my predictions sound too optimistic. Let me mention a few facts that have been fairly well proven in the short time we have studied the physiological effects of air conditioning: Blackfan, Yaglou and McKenzie showed that in the Infants Hospital in Boston the mortality of premature infants was cut from 28.9 per cent to 0.7 per cent by air conditioning the nursery. Many reports have shown its value in the treatment of hay fever and asthma. At the Corey Hill Hospital we have reduced the incidence of post operative pneumonia to 0.13 per cent whereas the average reported is 6 per cent to 7 per cent. The average post operative mortality is from 4 per cent to 4.5 per cent. The figures at the Corey Hill Hospital show 1.2 per cent. Research work now in progress leads us to believe that rheumatic fever patients are definitely improved by a warm, dry atmosphere.

I believe that in the future air conditioning will receive as careful specifications in new construction as plumbing does today. This will develop just as rapidly as we can pursue our research work, since only by careful research can we determine the standards necessary for such specifications.

Selling Electric Service to Commercial Customers

By H. H. Dinkins, Jr.
Ebasco Services, Inc., New York, N. Y.

An address before the Sixth Annual Sales Conference, Edison Electric Institute, Chicago, March 21-24

MR. J. G. BLAINE, President of the Marine Midland Trust Company of New York, after years of experience with a wide variety of problems of many business organizations, made the following wise observation:

"Rarely is there a problem raised which could not be answered by a satisfactory increase in sales volume."

You electric utility people gathered here today know that your industry is faced with serious problems. The utility business, like all others, must progress or perish. You are struggling with problems affecting all phases of utility operation—including those having to do with rates; taxation; competition, both direct and indirect, fair and unfair; limited plant and system capacities; restricted financing channels, and, of particularly vital interest, a widespread lack of customer appreciation of the Value and Cheapness of utility service as supplied by your companies.

I submit that these problems are challenges to better selling, as Mr. Blaine's remark implies, because to practically all of them more *Revenues from Better Sold Customers* offer the most constructive solution.

With the importance of these two closely related objectives in mind—More Sales and Better Sold Customers—let's turn our attention to the Commercial market for utility sales.

So that we're all clear on what we mean by the Commercial market, let's define it. Specifically we mean that Commercial customers are those customers who are engaged in retail and wholesale selling or distributing of commodities; in the business of rendering professional services, or in some form of social activity. Notice that no distinction is made in this definition between so-called wholesale and retail customers; rate classifications have nothing to do with what makes a Commercial customer. The guiding principle is the use to which the service is put—Commercial use as distinguished from Residential or Industrial.

MR. DINKINS

In this talk I shall cover in summary what I believe to be the more important principles that should be considered in doing an effective Commercial sales job. These observations are based largely on the experiences of 24 major electric companies operating in many parts of the United States. Obviously so broad a subject as Commercial sales needs vastly more detailed discussion than can be given in a 30-minute paper. Therefore, of necessity, this discussion must deal with *principles*. So, with that purpose in mind, I will touch briefly on each of the following eight points:

1. The Importance of Better Commercial Customer Relations.
2. The Commercial Market Presents a Vast Potential Sales Opportunity.
3. Modern Principles of Selling to Commercial Customers.
4. The Commercial Sales Organization Should Be Functionalized.
5. The Sales Promotion and Advertising Function of Commercial Selling.
6. Commercial Selling Methods In Successful Use.
7. Coordinate Your Sales Efforts with Those of All Sales Allies.
8. Adequate Control of Sales Costs and Results.

The Importance of Better Commercial Customer Relations

A moment ago I mentioned the Customer Relations aspects of all utility selling. Now let's consider briefly the particular importance of sound selling in cultivating better relations with Commercial utility customers. You will remember Mr. Fisher's statement on Tuesday regarding the Customer Relations aspects of the sound selling of life insurance, to the effect that:

"Life insurance if sold properly and maintained in force, creates customer good will."

That remark regarding life insurance selling provides a very constructive preface to what I am about to say about sound selling to Commercial Utility Customers.

As a group, your Commercial customers are influential ctizens, many participating actively in community affairs. They are accustomed to buying and selling their goods or services. They, like you, serve customers and, like you, have business problems. Consequently they are looking for solutions to these problems. To the extent that your service can aid them in their business or social undertakings and in solving their own problems, they can be interested in buying your service. Commercial electric service properly presented and sold can aid them greatly in this respect. If the

values that are inherent in this cheap service are sold to these customers as values that you, as a private utility, provide rather than that these values are due exclusively, or even importantly, to the merit of the particular manufacturer's equipment used, then better customer relations ensue as an inevitable by-product.

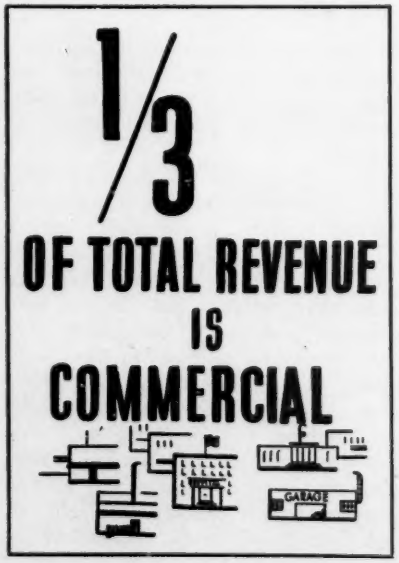
Also, since your Commercial customers are in contact with many of your other customers, their good will towards your company will be reflected broadly throughout the service area and thus have a far-reaching effect in the creation of good will with all your customers.

Your Commercial customers and their employees are also your Residential customers. Some of them buy from, sell to, or otherwise serve your Industrial customers—and not a few sit on town councils, school boards, associations of commerce, and other public or civic bodies, so in the aggregate they can exercise a dominant influence on what people really think about you as a local institution and can therefore play a vital role in your future. So it can be truly said that sound Commercial selling brings twofold benefits—benefits in *added revenues* and benefits in improved *customer relations.*

Now let's look at your Commercial *market opportunities* broadly.

The Commercial Market Presents a Vast Potential Sales Opportunity

E.E.I. statistics show that Commercial customers in the United States used electric service costing over 615 million dollars in 1937—almost a third of the total cost of all electric utility service.



Important as this segment of your business now is, by walking down the street in the shopping district or along side streets of almost any city or village in this country you can observe the astonishing degree to which this market is still unsold. Take lighting for example, the oldest utility service: bare lamps on drop cords, unlighted signs, show windows inadequately lighted at night, or worse still, unlighted during the day, are a common sight. Of course, it takes systematic, careful analysis to determine the exact market for specific Commercial services in specific sales territories, but by any yardstick we choose to measure, the Commercial market offers a vast sales opportunity for the use of more electric service. It is generally conceded, I believe, that present uses of electric service by the majority of Commercial customers have come about without the intensive sales and promotional effort that has characterized the Residential or Industrial fields. Generally speaking, most of us must admit, at least to ourselves, that Commercial electric service has been *bought rather than sold.*

Even where Commercial sales effort *has* been exerted, vigorous promotion in most localities has been limited to specialized selling of particular services such as lighting or air conditioning. Only recently, and in relatively isolated instances, has attention been given to the Commercial market as a whole, which in the aggregate makes up literally hundreds of uses of your service.

Commercial sales effort also has been generally confined to the larger customers located in downtown business sections rather than to the smaller but more numerous customers outside the main shopping areas. As a matter of fact, to develop fully the sales potentialities of this important market, periodic sales calls must be made on *every one* of the Commercial customers or prospects, large and small, on your lines.

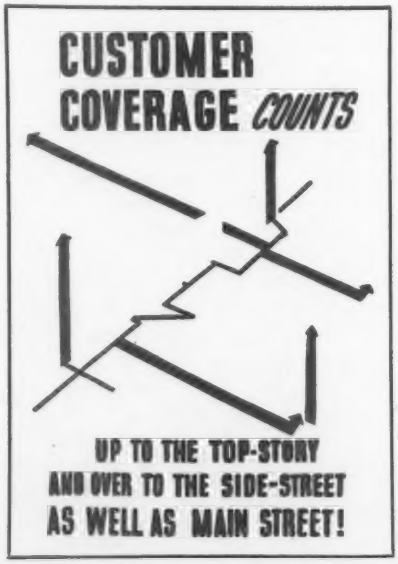
In this connection, let's consider for a moment the low-use Commercial customer, or as we have chosen to call him, the "Unsold Customer." Statistics reflecting the prevalence of low-users in the Commercial market have been prepared by a number of companies with surprising results. For example, the following approximate classification of Commercial customers according to use and bills, made by an electric company in a large Southern city, gives a fair idea of conditions existing and of the opportunities for sale of more electric service use among these customers.

The analysis showed that:

- ¼ use less than 1 kwhr per day, and pay less than $1.50 per month
- ½ use less than 3 kwhr per day, and pay less than $5 per month
- ¾ use less than 6 kwhr per day, and pay less than $10 per month
- only ¼ use over 6 kwhr per day, and pay over $10 per month

Survey results similar to those just cited are common and offer abundant reason for wider sales coverage aimed at inducing "a lot more Commercial customers to use a little more Commercial service." Sales activities which include adequate attention to these unsold customers have proven profitable to those companies which have conducted them.

The unsold customer is also often a customer relations problem. It's an old, but still true, adage of the utility industry that the more service the customer



uses the better satisfied he is with the service. So the answer to which type of Customer Relations you will have depends importantly upon effective selling. The unsold Commercial customer therefore may be said to be a menace to customer relations as well as an opportunity for effective selling.

Now let's consider the—

Modern Principles of Selling to Commercial Customers

Today's sales approach to the Commercial market must recognize that Commercial customers constitute a distinct class. They use electric service for reasons basically different from those of other classes of customers. A thorough understanding of the peculiar characteristics of Commercial customers *as buyers* and *users* of utility service is necessary in developing the most effective sales efforts and sales appeals. Commercial customers are motivated primarily by the desire for profit. Most of them are traders, accustomed to buying and selling products or services.

Since the Commercial customer group *is* different in character from either of the other major utility customer groups, it is essential that they be given a distinct type of sales treatment, by a separate and distinct sales organization of the Sales Department.

Also, it is well to bear in mind that you have a unique and very valuable service to sell. It is available from no other source than a utility and is valuable far in excess of the average customer's appreciation of it. The service is cheap when the cost is considered in relation to the values inherent in it. This value and cheapness, however, is by no means self-evident to the customer—the fact must be brought to the customer's attention repeatedly and dramatically, and in the customer's own language and in terms of his own needs.

Summed up, the primary objective of utility Commercial selling efforts is continued and increased use of electric service at a fair price, that is with profit to both buyer and seller. To accomplish this in Commercial utility sales it is necessary that your sales effort be directed specifically toward

—retaining existing business, or preventing load mortality, and

—developing and securing all possible profitable new business at minimum expense and in keeping with the customer's best interests.

To prevent load mortality means to keep present uses of service sold and to keep present revenues from decreasing.

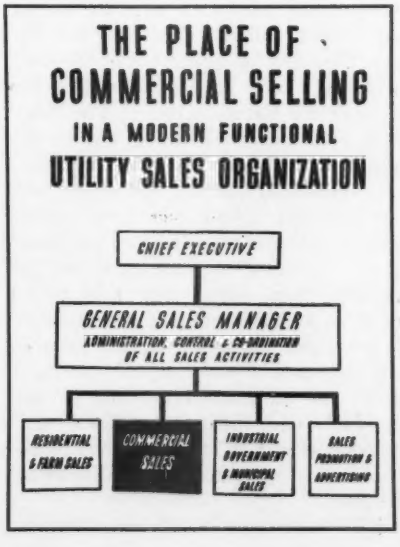
Developing all possible new business requires effort in two directions, namely, getting more customers and getting present customers to use more service. Since the field for securing additional customers is relatively restricted, the more important and promising field is in the sale of more service to present customers.

The aim to secure all possible new business must, of course, be supported by sales policies and practices which assure profit to customers, dealer allies, and utility alike. Commercial selling should seek to increase the use of electric service by all customers who can benefit from such increased use. And, by bringing about customer realization of the value of the service and by building up an appreciation in his mind that the utility rendering that service is a vital and necessary agency in the community in building better business and a higher standard of living, customer relations will be improved as a collateral result.

We come now to the question of what sales organization has been found to lend itself best to the accomplishment of the aims just outlined. Our studies and experience indicate that—

The Commercial Sales Organization Should Be Functionalized

By a functional sales organization I mean an organization wherein the entire sales responsibility is assigned to one department, in charge of a General Sales Manager and where the sales job is divided broadly into two parts—one a planning or "creative" function, and the other, an "execution" function. In such an organization Sales groups are assigned to sell service to Residential and Farm, Commercial and Industrial and Government and Municipal classes of customers, these being the execution groups, and another group is assigned the function of Advertising and Sales Promotion, that is of preparing sales plans, promotion, training and advertising material for use by all of the other three divisions of the Sales Department. This is the creative group. Thus, the Commercial sales activity is handled by a group of Commercial sales personnel specifically selected and trained in the sale of utility service to Commercial customers. Such centralization of sales responsibility results in the more intensive, skilled and effective cultivation of this market.



I should like to say in passing that the sales organization just described shows the functional principle applied to selling in concentrated areas. For scattered operations the principles are identical but their application differs somewhat in detail from the one shown on the chart.

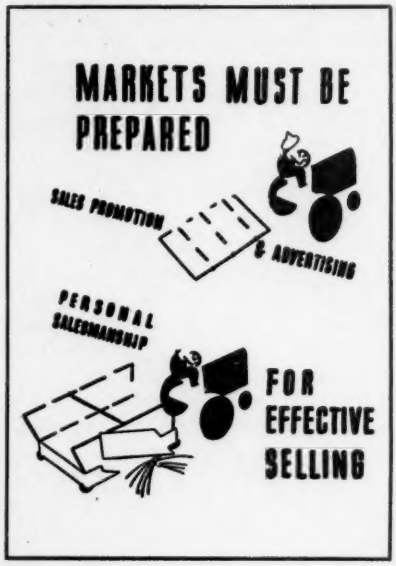
Having determined the form of organization best fitted to do the Commercial sales job, let's look at the question of size.

Remembering again the figures quoted in connection with the low-use customer survey, an analysis can readily be made in any company to determine the extent to which the Commercial market has been developed and to determine whether an adequate sales force has been provided in order to make as complete a sales coverage of all Commercial customers as is economically justified. Experience indicates at present that one Commercial salesman for each 750 to 1000 customers, depending upon the territory, can be readily justified. Such coverage will permit calling on each Commercial customer an average of two or three times per year, and Commercial Customer Coverage counts!

Obviously a functionalized Commercial sales organization, such as has been described, should be headed up by a manager of Commercial sales who reports to a General Sales Manager.

The training and supervision of Commercial salesmen should be assigned to supervisors having responsibility for the work of five to seven salesmen and reporting to the Commercial Sales Manager. Such Supervisors should be responsible for training and supervising the salesmen in their work, and in general in seeing that they get adequate results at reasonable costs.

Because of its vital bearing upon the success of Commercial Selling it should



be mentioned here that an important part of the salesman's duties should be the obtaining of market data to be turned over to the "creative" or Sales Promotion and Advertising Department for subsequent analysis and incorporation into sales plans to be executed by the Commercial Sales Department in future activities.

We have mentioned in this description of the Sales organization, the Sales Promotion and Advertising Department as an invaluable functional unit in the Sales Department. Now let's see in more detail what constitutes

The Sales Promotion and Advertising Function of Commercial Selling

Fundamentally the job facing every Commercial sales staff is, first to evaluate the sales possibilities of Commercial service, then to present dramatically the advantages of such service, so that the value of making liberal use of it will be understood by every Commercial customer.

That job of dramatizing the uses and values of electric service requires Sales Promotion and Advertising skill of the first order, as well as a reasonable appropriation of expense money.

Until very recently there has been a comparative dearth of Commercial Sales Promotional material. But as one company after another has more fully realized the potentialities of this market, there have been created more and more Commercial sales campaigns, Direct Mail advertising, Sales Training courses, Salesman's visualizers and handbooks, and similar assistance for the Commercial salesmen.

Markets must be prepared for effective selling and while substantial progress has been made by many electric service companies in providing adequate Sales Promotion and Advertising material as an essential part of Commercial Sales programs, and some manufacturers have prepared attractive direct mail and other literature aimed at promoting specific Commercial services, rather than equipment, there is still need for much improvement and expansion along these lines.

Careful and detailed Sales Planning and Budgeting are essential elements in the success of Commercial selling. In a functionalized Sales Department of the type I have been referring to in this paper, the Sales Promotion and Advertising Staff works out with the Commercial Sales Staff a planned program for each year's activities, including market analyses, sales campaigns, advertising, continuous organized Sales Training, salesmen's selling aids, visualizers, and the like.

Planned Commercial Sales Budgets and Programs are an invaluable aid in securing adequate Sales results in terms of both more Revenues and Better Customer Relations.

Progress in any endeavor is largely proportional to planning, and this truism is particularly applicable to progress in selling utility Commercial services.

Now let's discuss *Methods* briefly. I want particularly to mention a few of the more important features of the

Commercial Selling Methods In Successful Use

Among the most important recent forward steps in the development of efficient Commercial selling has been the use of All-Service Selling. The need for this type of selling has grown out of the ever-widening circle of uses developed for Commercial electric service. The older plan of Commercial Selling was to use Commercial "specialists," such as lighting specialists, cooking specialists, and the like, and to have power and motor services *handled* by a "power" salesman. I say "handled" because generally he handled them rather than sold them. Such an arrangement may have sufficed in years past but today, when Commercial applications are numbered in hundreds and all customers should be aggressively sold, the only practicable and economical way to sell all services to all Commercial customers is by All-Service salesmen.

The importance of this fact deserves

particular emphasis. The All-Service salesman as distinguished from the specialist, sells all customers assigned to him, both large and small; he sells all services to these customers, including the protection of all or part of the revenue from the inroads of competition.

Obviously, these are heavy responsibilities. All-Service selling, therefore, requires better salesmen, better trained and better supervised than specialist selling. But it produces better results at lower cost, all things considered, and that, you will agree, is the ultimate measure of its value.

The customer relations aspects of Commercial All-Service Selling are of importance also. Customers prefer All-Service selling. They prefer to deal with one well trained All-Service salesman who, due to the greater frequency of his calls, comes to know the customer and his business and business problems thoroughly, and thus is able to make more constructive application of utility service to the solution of these problems.

This point leads to the next which I wish to make, namely, that every sales call should be adequately reported in writing and each report should provide pertinent information about the customer's present uses and needs. Furthermore, such records are essential when setting up routines for systematic scheduling of salesmen's calls. Individual customer records should, of course, show specifically what additional uses of electric service each customer is a prospect for.

It is vitally important that you know your customer!

The process of collecting such data

for such customer records in the regular course of the Commercial salesman's duties constitutes a continuous market survey. The analysis of such data after they are gathered is a logical function of the Sales Promotion and Advertising Staff, who use their conclusions in formulating sizable sales objectives and adequate sales plans for reaching those objectives, as well as in the preparation of training material and other Sales aids to help the salesman perform a more valuable service to the customer, and thus secure a maximum of compensatory new business.

The most important thing to bear in mind, in Commercial selling, is that your Commercial sales success will eventually be determined by the skill with which your salesman is able to recognize and analyze the customer's problems and the aggressiveness with which he sells your company's service to help the customer solve those problems.

In final analysis the Commercial salesman needs to be thoroughly and constantly trained, and then closely supervised so that he works on an organized basis, carrying out sales plans provided for him by the Sales Promotion and Advertising Staff.

Another highly important phase of Commercial selling which has not yet been mentioned is the need to—

Coordinate Your Sales Efforts with Those of All Sales Allies

Close coordination of your efforts with those of all Sales Allies, and by that I means contractors, equipment dealers, architects, manufacturers, etc., is vital. Maximum sales results can only be accomplished in the Commercial market where every agency whose business welfare is influenced by the greater use of electric service, is tied into your sales promotional activity. To do this successfully sales policies must be deliberately designed to encourage the active sales participation of dealer allies with profit to themselves. In particular, sales policies having to do with utility merchandising should be such as to avoid direct merchandising competition by the utility.

"You can't compete and coordinate" is as true of Commercial selling as it is of Residential.

Sound sales policies based upon the principle of *utility leadership and* of selling *use* of Commercial service will inevitably cause Commercial customers to buy utilization equipment and it is in the sale of utilization equipment that dealers and other sales allies can so effectively tie in with your Commercial sales activities, programs and campaigns.

We have discussed, thus far, the opportunities for and advantages of Commercial utility sales and some of the more modern developments in the technique of Commercial selling.

Along with the evolution toward better Commercial selling has come a realization of the need for better sales records and controls. These, too, have improved and their importance in effective guidance of sales operations at reasonable cost cannot be over-estimated. Therefore, let's discuss for a moment the importance of—

Adequate Control of Sales Costs and Results

It has been mentioned before that "progress is proportional to planning." This is a generally accepted fact in utility sales work. However, the real *measure* of progress is not the plan but the results of the execution of the plan.

Sales Departments have been charged, on not infrequent occasions, with "talking big" but not always producing in proportion. Sound Sales management, therefore, surely dictates that judgments be based on performance, not on plans or predictions alone. Repeated failure of utility energy sales and revenues to show gains commensurate with widely heralded predictions or quotas as to "Increased EAR" warrant searching investigation, determination of facts, and adequate answers.

For example, the present widespread and regrettable lack of facts regarding the causes and amount of lost business or "load mortality" can hardly be safely ignored much longer.

Time does not permit a detailed discussion of this important subject, but I would like to leave you with the thought that increasing executive emphasis upon the compensatory up-building of *energy sales* and *use*, rather than upon the fractional and relatively simple job of selling equipment, requires a broad gauge and scientific approach on the part of the sales manager, to the job of selling Commercial utility service.

This broad gauge and scientific approach can only be sucessfully based upon adequate factual reports and suitable unit performance figures. These in turn need to be designed to gauge sales costs and results in terms of the fundamental objectives of changing the habits of use of utility service on the part of Commercial customers so that both they and the utility will profit from the resulting more extensive use of Commercial service, and so that at the same time better customer relations will ensue.

* * *

In summary let me repeat the ideas presented in this discussion:

1. The utility industry is faced with a multiplicity of serious and vexing problems.

2. More effective selling, by increasing profitable revenues and improving customer relations, can make major contributions to the solution of these problems.

3. The Commercial market is relatively unsold and it offers splendid opportunities both for securing additional profitable revenues and for improving utility customer relations.

4. The modern utility Commercial sales techniques of Functional Organization, All-Service selling, adequate Sales Promotion and Advertising, and selling Use of Service, have proven themselves superior in securing adequate sales results at reasonable costs.

5. The sales assistance of dealers and other sales allies is vital to the success of Commercial utility sales efforts.

6. The importance to sales managers of adequate records and reports as a means of close and constructive control of sales costs and results cannot be over-emphasized.

In conclusion, let me suggest that you take a new and *fresh* look at the Commercial sales market in your territories in the light of the opportunities it offers for building profitable new revenues and better customer relations. Let me suggest also that you re-examine *all* of your present Commercial sales practices, policies, and operations, and make certain that they meet your company's present day and future Commercial sales needs and opportunities.

If you do this from a detached and scientific standpoint and back your conclusions with the requisite men, money and materials, you can do a great deal for yourselves, your companies and your customers.

In the Public Interest

(*Continued from page* 162)

been conservative, honest and faithful. To punish the forgetful, laws have been enacted which restrict and retard the operations of the faithful. My answer to this is that no law which goes contrary to the moral or economic law can long justify its continuance.

It is my suggestion that we seek a renewed courage and determination from the prophecy of the late Thomas A. Edison, who when speaking of electrical development said:

"What this development will mean in comfort, in leisure, and in opportunity for the larger life of the spirit we have only begun to realize. Great days are ahead * * * and electricity will have a great part to play, granted only that it can be unfettered, with full opportunity for the largest possible individual initiative and energy."

Meeting Wiring Obstacles in Modernizing Commercial and Industrial Buildings

By Henry J. Morton
Consulting Engineer, Wiring Development

An address before the Sixth Annual Sales Conference, Edison Electric Institute, Chicago, March 21-24

MY initial assumption, in appearing before you, is that you all are convinced that 99 per cent of present buildings have insufficient copper capacities to properly supply these desirable additional loads which you are engaged to sell. Electrical sales people generally—and utility people in particular—are encountering with ever-increasing frequency this wiring obstacle. Failure on your part to "sell" additional uses can be directly attributed in many instances to the lack of, or the cost of, providing adequate amounts of wiring under present industry practices.

The entire electrical industry is talking "Adequate Wiring"—particularly the dire need to re-wire existing structures. When, due to the efforts of you salespeople, electrical use continues to increase at something like 10 per cent per annum and these additional uses are expected to be supplied over copper circuits which are being increased less than ½ of 1 per cent during the same period—something is bound to happen. In general, these things come to pass:

(a) Future load-building is seriously handicapped and much more expensive to sell.

(b) Possible revenue from loads already successfully sold is trickling away due to fuse failures and short periods of time when circuits are inoperative.

(c) The expense of replacing "blown fuses" is an increasing cost of operations. (Fuse failures are now running about one per capita per annum.)

(d) Low Voltage—with all its undesirable features.

(e) Increasing Customer Dissatisfaction.

The seriousness of this impediment to increased sales was brought to the attention of the technical people some time ago. Utility engineers such as Wagner, Noyes, Miller, Maxwell, Horton, and many others, have been busy for some fifteen years or more in performing a diagnosis. Their studies have compared to an exhaustive laboratory survey and analysis. This diagnosis has included

MR. MORTON

surveys of wiring standards and practices in every major country; field experiments, some of which have run into many thousands of dollars; and all of the other ramifications of this very clumsy problem. As a result of this experimentation facts can now be established particularly in regard to the selection of proper materials and methods. The application of their findings can effect a solution to this problem of inadequate wiring.

Engineers make poor salesmen—they admit it—and all these technical findings are serving no useful purpose to the public unless they are utilized to form the basis for intelligent sales promotion. It will be essential, from here on, for you salespeople to provide the necessary impetus and that must be done by acquainting yourselves with these innovations and then taking them to your respective local industry affiliations.

General Facts About Wiring

Many of the present wiring methods do not economically meet the needs of increasing electrical usage. Adequate wiring has only two basic factors: (a) ample copper, and (b) accessibility to this copper. If these conditions are not provided, wiring does not perform its intended service. A *good* wiring system, in addition to the above requirements, should also provide (c) safety of use—sufficient insulation and mechanical protective features based on anticipated conditions of use—and (d) economy of installation.

In order that the simple electrical circuit functions properly, the copper conductor, which incidentally is the only part of the total materials involved which conducts the current, must be covered with an insulating material. It is highly desirable and recognized by every technical mind in the industry that these insulating coverings should be adequately protected against injury —both during or subsequent to their installation.

Past technical studies have decreed that some of the emphasis which has been placed on insulating coverings and mechanical protective parts should be transferred to the copper content—the conducting medium. Many of you may not realize that of the 17 so-called wiring methods now accepted as good practice, no system, at present, has more than 7 per cent of the total material in the form of copper. Largely for this reason, it has been entirely too difficult to sell some of the present wiring methods when, in effect, the only part which performs its useful function is such a small percentage of the total product to be purchased. It has been like trying to sell an orange with a ¾-in. rind.

In commercial and industrial buildings we generally encounter a system of wiring consisting of pipes into which the conductors are drawn. This pipe system is fashioned after the plumbing industry and was introduced many years ago. It is the most expensive method of them all. The heavy steel enclosures were primarily intended to afford mechanical protection to the conductors.

Yet, in actual installation practice, many of these pipes are totally enclosed by the physical parts of the buildings; i.e., concrete, plaster, tile, etc. So that when once installed they serve only to provide a hole through which the circuit wires can be drawn.

Under present practices, 3300 watts is the maximum circuit capacity possible in a ½-in. pipe or "hole."

I hold in my hand a wire which is covered with an entirely new material. This is one of several new materials developed by manufacturers. Only recently has it been possible to announce these improved "dielectrics" which will permit the reduction of the overall size of the conductor. These new insulating materials will be safer than what the industry has used for so many years. If the *quantity* of insulation can be reduced without a sacrifice of quality—more copper can be installed in existing pipes.

It now becomes physically possible to more efficiently utilize existing "holes"; to increase the wattage capacity of any given conduit to easily three times, and in some instances four times, the present maximum. Commercial buildings can thus be re-wired at somewhere between ¼ to 1/10 of present estimates by being able to utilize part of the existing materials — the conduits — and without the necessity for expensive interior decoration so often encountered in department stores and office buildings.

The manufacturers have cooperated with the utility engineers in the many technical aspects of this problem. New and simplified types, shapes and sizes of materials are now available for installation.

The Wiring Subcommittee of the E.E.I., under the chairmanship of E. A. Brand of the Niagara Hudson Power Corporation, has reviewed the drafts of a series of pamphlets which are under preparation. One of these pamphlets will contain a complete explanation of the application of these technical developments — for Commercial Re-wiring. The personnel of this Committee is composed of both technical and salespeople. This will make possible a publication which incorporates the sales features advisable from your standpoint.

It has been my good fortune for the past year to have been dispatched—first under the auspices of the A.E.I.C. and now jointly for E.E.I. as well—on visits with operating company executives to discuss these wiring matters, and the need for local promotion.

At the start of my journeys (about a year ago) "A Suggested Plan of Procedure" was prepared—based on the successful experiences of a few companies. This general plan has since been adopted by many other companies, with equal success, and at the present time nearly sixty operating companies are already engaged in its use. This general plan has been sufficiently flexible to adjust itself to local aspects which may vary somewhat in minor detail only.

This general plan involves the following essentials:

(1) *Executive Sanction* to assign a "Technical Adviser" in each operating company. The Technical Adviser, you will find, will be the key man of your wiring promotion program.

He should be a capable electrical engineer, and will serve as a source of reliable information for use by the sales staff. This Technical Adviser should be a good committee man and public speaker, capable of tactfully presenting new and different ideas.

Because there have been only a nucleus of engineers engaged in these early studies, every operating company has not been fortunate enough to have one on its staff.

I have listed here the various sources from which detailed information can be obtained—which will serve to fortify the work of the sales staff.

The National Electrical Code—its contents, how it is formulated, and the N.F.P.A. Electrical Committee Personnel.

Standards of the Underwriters' Laboratories, Inc., of what they consist, how formulated, and their relationship to the American Standards Association.

The National Electrical Manufacturers' Association, its policies—particularly its Uniform Legislation Activities.

International Association of Electrical Inspectors, its membership-policies, and its National and Sectional meetings.

The National Electrical Safety Code, its contents, method of formulation, and relationship to the industry.

Codes and Standards Activities of the Association of Edison Illuminating Companies and Edison Electric Institute.

The National Electrical Contractors' Association.

Local Public Utility Commission Rulings.

Local Municipal Ordinances—their contents and status.

Local Electrical Organizations—their personnel and policies.

The duties of the Technical Adviser could well include:

(a) Supervise (or advise) in the preparation of specifications involved in Sales Promotional Activities. A technical adviser can prove most valuable in the preparation of specifications of economical installations.

(b) Free interchange of technical matters with local inspection agencies. Since specifications should incorporate the recommended use of new ideas, preliminary understandings with inspection authorities are most necessary.

(c) Active participation in as many local electrical organizations as possible.

(d) Keeping posted on wiring evolution as published in the technical press.

(e) Profuse interchange of ideas and experience with the Technical Advisers of other utility companies. This contact with other companies will lead toward unanimity of utility endeavors, and can largely be dependent on correspondence. An occasional conference of Technical Advisers will suffice for the final coordination of a National Program.

2. Sales Promotion

(a) Establish direct sales promotion of safe, economical and adequate wiring projects.

This is being done in a few localities with beneficial results. Ranges, water heaters, and air-conditioning equipment are other possibilities for immediate consideration. Rewiring of commercial buildings for greater electrical usage is being seriously considered in many parts of the country.

(b) Continually and persistently introduce new and lower unit cost wiring materials and methods—which may or may not conform to the commonly accepted practice.

There are two existing utility policies regarding introduction of new wiring materials and methods. One is—waiting for Code recognition before encouraging any local "trials." The other is, local cooperative "trials," thus expediting recognition in the National Code. If wiring practices are to be modernized sufficiently fast to keep ahead of increasing electrical use, it will be necessary for a larger number of local companies to adopt the latter policy.

(c) Establish effective cooperation with local inspection and industry groups.

Cooperative endeavor is necessary for the success of any worthwhile project. Experience in some localities has proven that a liberal inspection policy will encourage "modernization" of wiring practices.

(d) To convince local labor representatives that only promotional activities which increase labor hours are being undertaken.

In places where labor representatives have acquiesced to changes in wiring practice, *an effective promotion of lower unit cost methods has developed increased business.*

3. Sales-Technical Combined Aspects

(a) To investigate the experience of companies who have been engaged in wiring development.

A few companies have been aggressive in Wiring Promotion, but because of lack of unanimity of policies of Utilities as a group, with respect to National Codes and Wiring Standards, many do not recognize practices

which have been most successful in these particular communities. These same companies have acquired experience over a period of years in effecting cooperation with other local industry groups. A knowledge of their experience would be most helpful.

(b) To acquaint proper departments and personnel of your company with the desirability of Wiring Promotion.

It is perfectly natural that "antiquated" ideas of wiring are current among utility company employees. These same employees will benefit from Wiring Development, and if properly acquainted with the reasons for the activity, they will be in a position to render valuable assistance.

The promotion of new ideas in wiring is primarily an educational problem. It involves contractors, journeymen, wholesalers, and inspectors in your local relationships.

It also involves the discussion and changes in rules and regulations embodied in ordinances and state laws. These wiring standards have been self-made by the industry as a whole. The utilities have had their representatives on many of the formulating committees. If the industry has self-policed itself to the point where future expansion is difficult, that same industry can rectify its errors.

Existing regulations need modernization, simplification and clarification. (Many of the present requirements are not based on public safety.)

To gain maximum benefit from scientific developments, the interest of the public should be paramount in the formulation of Wiring Codes and Standards.

A larger number of utilities should start definite local action to effect a satisfactory revision of the established approval procedure.

Unreasonable local restrictions, not essential to public safety, should be eliminated.

Progress towards better wiring can be expedited by more effective cooperation with local inspectors in the joint consideration and trial of new developments even though they be outside of present antiquated ordinances.

Such efforts will have the ultimate effect of:

Increased labor hours; Larger gross sales of wiring materials; More wiring installations for contractors; Adequate yet economical wiring for the public; Increased electrical usage, and all this without sacrifice of safety.

In conjunction with my many visits to operating companies during the past year, I have had occasion to attend numerous informal local industry meetings. Meetings with an inspector, some contractors and the journeymen representatives in attendance. When sufficient time is taken to explain the merits of these new wiring developments, they show every desire to cooperate. It is necessary, of course, in talking to contractors to translate these details into dollars of business for them; to inform labor representatives, in the extra labor hours which will be created; and to point out to manufacturers and their wholesalers how they will obtain increased gross sales of materials.

These many pleasant personal contacts which I have experienced lead me to recommend a cessation of sharp criticism in future negotiations. That practice should be considered water over the dam. It's been a big dam, and there has been plenty of water. Some of it probably has been slightly discolored or bad tasting.

I cannot emphasize too strongly that the other branches of the electrical industry are anxiously waiting to cooperate. This has been evidenced in their extreme interest to discuss all of the details involved and their many urgent requests at their meetings for someone of the utility people to take part on their programs and carefully explain our ideas. This is an educational problem—the solution will be to eliminate "misunderstandings."

If, in initial discussions, first reactions do not indicate any willingness to cooperate, it should not discourage further efforts. The possibilities are that either the subject under discussion has been inadequately explained, or you have encountered an inherent characteristic of human nature—extreme reticence to accept a change conducive to progress.

One other matter which might well be mentioned here, as it is related to commercial re-wiring. The lamp manufacturers have recently announced a new light source—fluorescence. I believe I am correct in saying that inferences have been made that the application of this product will serve to delay the need for re-wiring many commercial or industrial buildings.

Your technical wiring advisers do not find this to be so. Fluorescent lighting involves accessories having low power factor characteristics; in some cases 220 volt circuits will be required; and re-circuiting necessary to provide convenient switching and control. The effect of the application of this new lamp upon existing wiring systems will quite generally impose additional burdens. With a general ratio of 2:1 on light intensities, and the counter ratio of 1:2 on copper cross-section (to offset reduced voltage due to reactive current effect), wiring systems at best can only "hold their own"—at least as long as the present types of fluorescent lamp starting mechanisms are being considered.

About three weeks ago I had the pleasure of listening to Dr. Ruthven, president of the University of Michigan, discuss features of higher education. He made this statement: "Knowledge is being acquired in ever-increasing amounts, and one of the most serious tasks of a faculty is deciding which part of this knowledge shall be selected and put to further use."

Dr. Ruthven also stated that "for the benefit of all mankind, the outstanding subject which should be taught in any institution of learning today is TOLERANCE—TOLERANCE to our fellowmen."

These two thoughts apply equally well in the solution of our problem at hand.

Having been a part of this technical diagnosis of a troublesome problem—inadequate wiring—I feel that these engineers have now ferreted out the practical methods for solution. And now comes the time when more of you sales executives will do the job you are most capable of doing—removing "Inadequate Wiring" from the category in which Mark Twain placed the weather; "Everybody complains about it—but nobody does anything to change it."

Overcoming wiring obstacles in commercial and industrial buildings—or any type of building—will prove both fascinating and profitable—not only to us, but every part of this electrical industry. This industry can then satisfactorily serve the public with other electrical conveniences — which they are anxious to have, and we are desirous of selling.

An innovation in the Commercial Program of the Edison Electric Institute this year is a Rural Sales Conference which is scheduled for Detroit, Mich. Mr. Harris E. Dexter, Chairman of the General Sales Committee of the Institute, advises the tentative dates are October 19th and 20th.

Infra-Red Heating

By E. L. Kavanaugh
The Detroit Edison Company

An address before the Sixth Annual Sales Conference, Edison Electric Institute, Chicago, March 21-24

WHEN one speaks or writes on any subject, it is necessary that one be specific in his statements if they are to have more than general significance. The question of infra-red radiation for drying and baking is relatively new and this writer does not profess to have more than a general knowledge of the subject. He has found it necessary to call on his good friends in the electrical industry for information, and this paper contains such data as have been collected from various sources and it cover the experiences we have had with certain infra-red heating installations. It is probable that there are in this audience or among those who may later read this paper, many individuals who are more familiar than the writer with angstrom units, microns, radiation spectrum, intensities and the increases in wavelength of radiant energy, from the ultra-violet, through the visible, and into the infra-red regions. But our primary interest here, is in finding out how this heat source can be successfully applied and thus provide another tool for the Power Sales Engineer to enable him to increase his kilowatthour sales.

The transfer of heat from one substance to another can be accomplished in one of three ways—by convection, conduction or radiation—or by a combination of any two or three of these ways.

Convection Heating is accomplished by the transfer of heat from one substance to another by means of a gaseous or liquid medium. This requires the heating and circulating of large quantities of air which, commercially, usually requires a large oven or similar container occupying considerable valuable floor space and these ovens are expensive to build.

Conduction Heating depends upon direct physical contact between the source and the substance to be heated. This method is satisfactory when heating materials of similar shapes, but it is difficult with odd shaped pieces and practically impossible for objects moving on a conveyor.

Radiant Heating does not require physical contact with either the source or with huge quantities of air. The application of the principle of radiant heating or radiant drying to the drying or baking of enamels on metal surfaces relies primarily on the use of an incandescent source, in which most of the energy is in the so-called infra-red region.

MR. KAVANAUGH

Perhaps a brief story of the present known range or spectrum of radiant energy if told here will refresh our memories as to the production of light and enable us to understand why certain light sources are needed or adapted for special purposes. Because the eyes use light more or less unconsciously, few of us ever pause to consider its nature or how it is produced; but it is common knowledge that substances heated to high temperature give off light. It is also generally accepted that these light sources send out waves similar to the waves from radio stations, except that light waves are shorter. Light waves are only a small portion of the waves radiated by any hot substance, but the eye, like the ordinary radio receiver, is tuned to only a narrow range. When these waves enter the normal eye, vision takes place. Shorter waves called "ultra-violet" and longer waves called "infra-red" are invisible as far as the human eye is concerned. When you heat a bar of iron in a furnace it sends out first, only infra-red waves then, as it becomes hotter, it begins to glow a dull red, showing that it is starting to send out visible radiations. If heated still more, it will send out shorter and shorter waves until when white hot, it would radiate nearly all the waves within the range which the eye can detect.

The infra-red energy that we are concerned about is that portion of the spectrum near the visible, the portion between the red end of the visible spectrum at 0.7 microns to about 100 microns. These values tell us the wavelength in millionths of a meter of the radiation.

It is extremely easy to find sources of infra-red radiation. In fact, anything which is above absolute zero in temperature is a constant source of infra-red radiations. However, if we intend to use these infra-red radiations as a commercial means of transferring heat energy from one body to another, it will be necessary to use a source operating at a temperature considerably above ordinary room temperatures. The reason is, that the rate of energy transfer between bodies at different temperatures is a *function* of the difference in temperature between those bodies. Thus it would appear that for maximum energy transfer, we should operate our infra-red source at as high a temperature as possible. However, although more energy is emitted at higher temperatures, the predominant wave length of the radiation becomes such that the body we wish to heat may reflect instead of absorb the waves, and consequently not receive the heat being radiated by the source. The predominant wavelength is that wavelength in which the greatest concentration of energy is present. A typical "spectral energy" curve of an incandescent type infra-red radiator would show the filament of the lamp as radiating energy at all wavelengths in the infra-red region. It would also show that the major portion of all the energy radiated

would be between 1 and 3 microns with a lesser portion as far out as 5 microns.

It is necessary that these infra-red rays be absorbed by the body to be heated before heat is formed. If the rays are reflected from the surface or if they pass through the body, it is obvious these rays will not be effective in producing heat. It has been found that the ability of a surface to reflect infra-red rays varies with the wavelength of the infra-red. Evidently, then, we should use a medium between the wavelengths from a high temperature source and the wavelengths best suited to effect a transfer of this energy. An infra-red source well suited for the purpose is the ordinary incandescent lamp. The filament operates at a temperature very near the desired temperature and in general between 80 and 90 per cent of its energy output is in the form of radiant energy. That is to say, the ordinary incandescent lamp can be used for radiant drying. But because of the high operating temperature of the filament, its operating life is relatively short. Manufacturers have placed on the market, lamps operating at lower temperatures with the same or greater total energy radiation and a practical operating life of tens of thousands of hours.

Thus far in this paper, we have limited ourselves to a definition of infra-red radiation and how it can be produced. Now we will discuss the means of directing or reflecting the radiations from the source to the material we wish to heat. Fortunately infra-red radiations follow the same laws of optics as visible radiations, and consequently we can make reflectors for the purpose of redirecting the rays in any manner we choose. Unlike the *conduction* and *convection* methods of heat transfer, previously referred to, no great amount of complicated heat insulation is necessary, because no sensible heat is formed until the rays are absorbed by the body. The chief requirement is that the rays be directed toward the object or surface to be heated, by means of reflectors on the lamp, and, where necessary, by auxiliary reflecting surfaces to reduce the amount of lost radiant energy to a minimum.

Much remains to be done to determine the most effective reflector. Automobile headlight reflectors were used satisfactorily on one of the earlier drying installations. More recently manufacturers have brought out specially shaped, so-called "radiant energy drying" reflectors. The reflecting surfaces are of different materials. It is a well known fact that gold and silver have greater reflecting power than say nickel, copper, steel or brass. It has been found that gold will give the best reflecting surface under continuous operating conditions because it will "stand up" in service and reflect in excess of 95 per cent of the available infra-red energy. Therefore, it is my opinion that at present the most suitable reflector available for general use is a goldplated parabolic and spherical shaped unit.

The reflector is mountable at the rim for applications requiring a totally enclosed furnace, or at the base of the socket-housing where an open furnace is used. This latter open type mounting is used where no air circulation other than natural convection currents is necessary. I repeat that this combination shaped goldplated reflector is the best available at present, but further work should be done on the design of reflectors and the selection of reflection materials. Obviously, the shape of the radiation pattern from the present type reflector does not lend itself, readily, to all possible applications.

Uniform intensity of radiation over a flat surface can only be obtained from a reflector giving a ray pattern similar in shape to the body or section thereof to be heated. Further improvement in the design of the shape to reduce the space required in mounting is desirable. In general, the reflector should have a highly polished surface of high reflectivity in the infra-red region, ability to pick up and redirect the highest percentage of the bulb output, and it should produce a beam reasonably concentrated at least over a major portion of the reflector opening.

Individuals much more learned than I, argue for days over the principles of physics underlying the ability of infra-red radiations to transfer heat, but there can be no question in your mind or mine that heat is transferred. This heat becomes easily measurable when infra-red rays have been absorbed in a material. Many materials absorb a large portion of the radiant energy striking the surfaces with consequent production of heat. It is because of the production of heat within a material, or within a coating on the material, that the drying time may be shortened over that period in air drying in an oven.

Quick Drying Enamels or lacquers, a high lustre paint composed of pigment, a solvent and a plastic binder, harden readily by the evaporation of the solvent. A small increase in temperature produces a considerable increase in the rate of evaporation; thus the exposure of a lacquer coated surface to an infra-red source results in a marked increase in the drying rate. *Enamels* or paints having an oil base harden by oxidation of the oil. The rate of drying is slow; and although an increase of temperature will tend to hasten the oxidation reaction, the use of infra-red radiation is not practical because speed, the chief advantage of infra-red, is not obtainable.

Infra-red is not necessarily limited to the drying of surface coatings, and it may be extended to the production of heat in any material where conditions are favorable. However, it must be remembered it is not a panacea for all ills. It will not handle all jobs satisfactorily.

Several installations of infra-red heating have been most successful. I believe the most notable of these is the installation at the Ford Motor Company in Detroit where there are some 20,000 lamps in use.

The first installation by the Ford Motor Company was made about three years ago for *repairing* finished bodies which were marred along the assembly line. Present day enamels require baking at 240 to 250 degrees F. and if a *repair job* was baked in the usual steam oven at this temperature, it would damage the glass windows, upholstery, paneling, etc. To eliminate tearing down the assembled body for paint repairs, Ford Motor installed lamp banks consisting of 20 or 30 lamps backed up by goldplated reflectors. An additional advantage found with this type of baking was that only 5 to 20 minutes' baking was required for complete drying.

Prior to this time, bodies were finished with lacquer and lacquer repairing did not require baking. Baked enamel bodies, which formerly dried in steam-heated ovens, could be repaired with some quick drying lacquer that required no baking, but repaired spots soon showed up in service as dull blotches or off-color spots on the otherwise good finish. Use of infra-red and the proper enamel permitted perfect spot repair in a very short time and eliminated buffing and polishing.

The success of the *repair* installations led to experimenting with the entire body finish. An installation was made early in 1937 to take care of baking the prime coat. This consisted of a series of double clamshells that would com-

pletely enclose the entire body. The bodies traveled on an overhead conveyor which brought them between two synchronized conveyors carrying the clamshells of light. Each clamshell consisted simply of an open framework for supporting the reflectors backing up the carbon filament lamps. Baking time by this method was only 7 minutes as compared to one hour in the steam heated ovens formerly used. Moreover, the entire installation required only about 3000 to 4000 sq. ft. of floor area as compared with 10,000 to 12,000 sq. ft. required by the old steam ovens.

Operating cost comparisons are not available, but it was observed that there was a dollar and cents saving as well as the other advantages of speedier drying, increased production, saving in production space, and better finish resulting from "inside-out" drying. For any new installations there would also be an enormous saving in installation cost.

Another application that came along at the same time was "light tunnels" for drying off the water after acid wash and wet-sanding. The main advantage of this operation was thorough, and fast drying, speeding up production. Prior to this time, the conveyor operated at slower speeds and time apparently was not important. Consequently only an air-dry was used.

Last year, the original clamshells were replaced by light tunnels for paint drying. The overall length of these tunnels varies from 30 ft., for drying water after the acid wash, to 85 ft., used for drying the "guide" coat. The 30-ft. tunnel uses 700 lamps or approximately 175 kw. The 85-ft. tunnels use about 2100 lamps or approximately 525 kw. Using these tunnels, the prime coat requires about 10 kwhr per body. The guide coat about 13 kwhr per body. Drying off the water after acid bath and wet-sanding requires about 5 kwhr per body.

Comparative operating costs are not available for infra-red versus steam oven operation, but Ford Motor go on record as saying that the cost of infra-red is considerably less. This fact is borne out by their installation of infra-red "ovens" in the Norfolk, Va., plant where 8000 lamps have been installed. Infra-red will also be used in their new French plant now under construction and also their Daganham plant in England. The saving in building space was a consideration in this case. The only body job not done now with infra-red, at the Rouge plant, is the finish coat job. And, I understand, infra-red tunnels have now been ordered to take care of this job.

A circular oven was installed at their Minneapolis plant for drying wheels. The oven is 36 ft. long and includes 336 lamps or about 80 kw. It dries about 270 wheels per hour requiring about 1/3 of a kwhr per wheel. A similar oven will soon be installed at the Rouge plant.

Steering columns are dried at the Rouge plant on a conveyor line passing between parallel banks of lights. These banks total approximately 100 kw and take up less than 100 sq. ft. of floor space. The fuel fired oven formerly used was about 150 ft. long and 20 ft. high. Ford Motor discovered that infra-red drying was speedy enough to check the flow of enamel after spraying and they have therefore been able to eliminate one coat on these columns.

The connecting rod-piston assembly has been simplified at the Rouge plant by using infra-red lamps. The piston is readily expanded by passing between two rows of lamps with an additional row focused on the top. The bank is only 10 or 15 ft. long and uses less than 15 kw. It replaced a large fuel fired oven.

These lamps are also used for expanding and drawing the ring gears. Another application is in their blue-printing department. Banks are also located at various spots around the plant for drying water after various parts are washed.

In the Chrysler Detroit plants, high frequency induction heating installed several years ago is used for drying of wheels, splashers, fenders, radiator shells and head lamps. Body drying is done in gas and steam heated ovens. Portable infra-red banks are used for repair work and spotting. Chrysler engineers are following the developments of infra-red drying closely, and no doubt will give it serious consideration when changes are contemplated.

There have been several *unsuccessful* applications of infra-red heat and a few examples of these follow.

A company making ash trays of various shapes finds it necessary to dip the pieces and were not able to use quick drying lacquer because it sets before it runs off uniformly. Under straight infra-red, the paint was not dry after two hours' exposure. We exposed the trays to ultra-violet light for 30 min. and then infra-red for 30 min. They seemed to dry but were not hard baked enough. The use of a quick drying enamel will probably solve the difficulty.

A customer manufacturing oil burners puts a crackle finish on the shell. At present, he is spraying with an enamel containing Chinawood oil and the shells are dried in an oven in 15 min. at 450 deg. F. The time which elapses between spraying and delivery to the oven allows the Chinawood oil to form a thin skin on the surface. In the oven, the body of the paint is caused to shrink by the heat and the movement produces a crackle finish. The last test with infra-red showed only about 325 deg. F. could be obtained in the metal and this was insufficient to obtain the desired results. A change in the type of enamel will correct this condition or possibly the use of a closed furnace resulting in higher temperatures would solve the problem.

A carpet cleaning company was interested in speeding their rug drying. Preliminary checks indicated infra-red had possibilities but under actual test the drying time was not reduced and the cost was about double the steam method, $2.70 to $3.00 at 2¾c. per kwhr. From the results of this test, we concluded that where moisture alone was to be driven off, other means of drying would probably prove more economical.

A test installation was set up in a print shop. An attempt was made to decrease the time required to dry the ink on printed sheets so that the folding and binding operation could be performed without smudging the ink. It was found that this particular ink, like natural enamels, required absorption and oxidation reactions for drying and is not appreciably aided by the application of heat. Further tests in a half-dozen other plants confirm these conclusions. We are now working with these customers and the paint manufacturers to obtain inks and enamels that will meet their requirements and permit the use of infra-red for drying. It is reported that the du Pont Company have appointed a number of men to go over their plants to find and possibly create new applications for the infra-red lamp units. I also understand you can tell the du Pont people you want to dry with infra-red and they will specify the paint for the job.

A trial installation of four infra-red lamps concentrated on impregnated fibre board produced satisfactory results but they were slow. A 10 kw oven using strip heaters holding two stacks of boards proved to be the solution. I mention

that here, because the installation was the direct result of the interest stimulated in electric heat by the infra-red lamps.

An envelope company is successfully using infra-red heat to dry gum on envelope flaps. The application results in reducing the drying time and practically eliminated flap curling previously encountered in air drying.

A manufacturer was planning two new products for the 1939 cars—a lacquer finished floorboard and a thermoplastic panel. Both would require drying and the experimental test run using infra-red proved that we could dry both jobs in a surprisingly short time. They had two other alternatives. The 24 in. by 36 in. sprayed panels could be set on racks and stored for one to three days, depending upon the humidity and temperature in the plant. This method obviously would use a large portion of their production floor space and handling costs would be high. A fuel-fired oven could be used but required considerable investment and would add an appreciable item for operating expense. They decided on infra-red. The installation is comprised of five banks of lamps, 11 lamps long and five lamps wide, mounted over a conveyor line. The first bank preheats the board before spraying. The other four banks are located after the spray booth with 5 ft. spacing between banks. The conveyor speed was originally calculated to be 16 ft. per min. When put into production, the drying time was found to be much less than expected and the conveyor speed was increased to 35 ft. per min. It so happens that this equipment can be operated "off-peak" and the electrical cost is said to be only one-third that of fuel-fired equipment.

A manufacturer of metal trim operated a batch type gas oven for enamel drying. The oven produced about 700 to 800 lb. per hr. and consumed approximately 5000 cu. ft. of 1050 B.t.u. gas per hr. at an average cost of 45c. per 1000 cu. ft. The oven was replaced with an installation of 120 lamps of 240 watts each over a conveyor requiring about 10 min. drying time and the same net output per hour. With electricity at 1½c. per kwhr, a saving of $1.80 per hr. in fuel costs resulted. Consequently based on fuel alone, the drying equipment could be paid for in 350 or 400 hr. of operation. In addition, considerable floor space is released for other uses. Less labor is required and shop working conditions are improved.

An electric motor repair shop using strip heaters and steam heat in an oven 8 ft. x 6 ft. x 6 ft. required a minimum of 8 hr. for baking stator and armature windings. Three coats are necessary so that without night operation, it was impossible to get the repaired job back to the customer in less than three days. They now have a circular infra-red bank of 15-260 watt lamps and complete the drying on the smaller motors in a little less than 2 hr. This permits one day repair service and better satisfied customers.

Small portable banks containing from 10 to 50 lamps are available for use in small repair garages. They can be assembled or purchased complete. Quick drying of the enamel on repaired fender or body jobs reduces the labor cost, gives the customer better service and enables the garage man to increase his volume.

One of the largest producers of enamel plate in the United States is planning on infra-red drying of rolled plate.

There are a good many other applications being investigated and they will develop more rapidly as we become more familiar with the possibilities of present installations.

In conclusion, we might list a few of the advantages of drying or baking with radiant energy.

1. Requires minimum amount of floor space.
2. Lower initial investment for oven equipment.
3. Quicker drying time.
4. No preheating or "warm-up" time required, close the switch and begin drying.
5. More uniform control of drying.
6. Greater flexibility in drying operations —changes in production can be handled efficiently by operating only part of the lamps without affecting overall efficiency, or if production is increased units can be added at a minimum expense.

So diverse and widespread are the possible applications of this relatively new commercially successful method of heating, one hesitates to make a prediction on its ultimate growth. It was used 20 years ago for the baking and roasting of foods, but since then it has hardly been known outside the medical profession. It is only recently that we began to find out its commercial possibilities. Test installations have proven that the use of the incandescent lamp to produce radiant energy is not always the solution of drying problems, but the many successful installations already made indicate that the development of this market should be extremely profitable.

It is true that this lamp does not have the miraculous qualities reported for the one from the Land of Aladdin. It will not create a ship full of jewels nor cause a person to be transported from one city to another, but it will do other things of equal importance to us and our customers.

May I suggest that each of you assign individuals within your respective organizations who will make it their business to devote a continuing study to new applications, and report their findings to this committee for distribution to the member companies so that we may all benefit from each other's experiences.

Stepping Up Dealer Sales

(*Continued from page* 168)

ances, fabrics, foods and other items. The manufacturer, utility and dealer must work together in educating the consumer, in eliminating unfair trade practices, and in developing quality products.

IV. Principles Involving Technique or Presentation of Materials

1. Improve your technique in handling conferences and training programs. —This refers to the technique of handling and not to the subject matter. As an educator, I am impressed with the fact that dealer-relations work is essentially dealer education. Industry is quick to adopt the most effective production techniques or office devices but in handling conferences and group meetings it is behind the times. Most meetings last too long. The presentations are given by men whose virtue may be successful selling, knowledge of product or some factor other than ability to present material.

What can the utility do when dealer will not cooperate? The utility devises a good plan and then can't get it utilized. This is a difficult question to answer as we may be dealing with apathy of dealer as well as ineffective merchandising of plan by utility. Utilities do a lot of preselling, but when sale is made, the dealer takes credit and, being human, he is inclined to forget the selling efforts of the utility. At this point his own selling genius stands out in his mind. The field workers of utilities and distributors can aid in remedying this situation. Definite policy is necessary. The utility must define the place it wishes to take in the promotion of appliances.

My paper has stressed the more or less immediate relations between dealers, utilities and manufacturers. There are many factors at work which may shape the potentialities of stepping up dealer sales. I will mention them at this time and leave it to further deliberations within the industry as to how they may be reckoned with. Package selling, excessively low terms with long periods for payments, Robinson-Patman Act, Wheeler-Lea Act, wholesalers selling to consumers, rural electrification, etc.

Oak Trees From Little Acorns Grow

By G. E. Duerr
West Penn Power Co., Pittsburgh, Penna.

An address before the Sixth Annual Sales Conference, Edison Electric Institute, Chicago, March 21-24

IF I were to stand up here and suggest to you that industrial lighting is one of our best load building opportunities, you would immediately begin to wonder what Pittsburgh booby-hatch I escaped from, wouldn't you?

But at the risk of incurring your bad opinion at the beginning, I do want to suggest to you that *Industrial Lighting is the finest tool that a power salesman can have in his "bag of tricks" for building load for our lines.*

Sounds screwy, doesn't it? But I have convinced myself that it's true, and I'd like to try to convince you. Industrial Lighting *is* the finest tool that a power salesman can have in his "bag of tricks" for building load for his company's lines.

To get at what I mean, you will have to look at the power salesman for a moment.

A power salesman is a chap who continually dreams of the day when he is going to knock off that big job. He can picture himself strutting into the boss's office and slapping down the contract like you usually slap down an ace on your opponent's king. He can picture the boss rising in all his dignity, grasping him by the hand and saying, "Johnny, you are the smartest lad that I know. Remind me to reward you with a hamburger some day."

But this power salesman also knows that if he strutted in and said, "Hi-ya, boss, congratulate me. I just added a 200 watt lamp at the Steel Company," the boss would say, "Humph," or "Harumph," and heave the ink well.

Now I know that that is so, because it has happened to me. The only difference is that my boss is extremely polite and doesn't throw ink wells. He just says, "My gosh, how did you dig up all that load?" But he has a bad habit of allowing a faint tinge of sarcasm to creep into his voice when he says it, and I begin to wonder if he isn't going to look pretty closely at my next pay check and start planning to farm me out to the W.P.A.

But such is the life of the power salesman. He plugs away at converting that steam engine job or selling the idea of a big electric annealing furnace, hoping that he will get a break some day. And as he plugs away, he comes back day after day without a single closed job in the bag.

MR. DUERR

I'd been doing just that sort of thing right along and one day the boss called me in. You know, it embarrasses me a little to have to tell you this while he sits here so close to me, but I still have to get out of that booby-hatch that I mentioned a few moments ago.

So he called me in and he said, "What's the trouble?" I had lots of alibis, but he soon lost interest in them. And so he says, "Why don't you go out and sell some industrial lighting?"

What could I say? I said, "Yes, sir," grabbed my brief case, jumped into my trusty Chevy and went out to sell—*an increased air compressor installation.*

And I got kicked out of the plant on my ear.

That made me sort of mad, but by the time I got back to my car, I was so low in spirit that I decided nothing worse could happen to me, and so I might as well try the boss's suggestion.

I turned around and went right back in. Only this time I went to the plant superintendent and not the big boss.

I don't remember just what I said, but it must have been something as unsalesman-like as, "Hello, Bob, got any lighting problems today?" And, by golly, for the first time in weeks, somebody "yessed" me. He said, "Yes, we have a problem in the core shop," and he went on to describe it.

Man, was I embarrassed when I realized that I didn't have the faintest idea how to tackle it. But to make the best of a bad situation, I said, "O.K., I'll be back in a day or two and you can show it to me."

So I headed back to the office as fast as I could go, got out the lighting information which the company had spent good money to collect for me, knocked off the dust, and with the help of a couple of guys who knew what they were talking about, got enough dope so I could tackle the job. And to make a long story short, my recommendation must have sounded like sense to my customer because they bought the equipment and put it in.

But listen to what has happened since. In the first place, this lighting job that I had no desire to do, much to my surprise, amounted to 9 kw.

Second, in the doing of the lighting job, I learned quite a number of things about the plant. For example, they were a way behind in their orders, and the funny thing, probably because we were standing around in the dust, dirt and noise, they didn't seem to mind telling me where the bottle necks were and even invited me to sit in on the discussion of what they could do about it.

So, as a result, there has now been added additional ramming machines, a new sand conditioning machine, additional conveyors and because these new machines all needed air, they had to replace the air compressor, which was my reason for going there in the first place.

But that still isn't all. In doing the lighting job, I found that these objects

which we were trying to light also had to be dried. The method in use had limits which suggested an application of on-the-spot heating. So we are trying that. Also we have planned that the rearranged plant will be on a 24-hour production basis, which means that something must be done to provide dust removal, which again provides a prospect for another 75 to 100 kw.

Gentlemen, definitely something happened to me that day that I put my tongue in my cheek and said, "Hello, Bob, got any lighting problems today?"

As near as I can figure it, they must have considered the lighting job as a real service to them rather than an attempt to sell them some more electricity.

For that reason they apparently forgot that I was supposed to be a salesman and were willing to take me in for what I could contribute. Naturally the remainder of the process was simple. All I had to do was find out what they wanted to buy next and help them to buy it. Definitely, lighting was that tool which came out of my "bag of tricks" and started the chain of events which followed.

And so I ask you, Which would you prefer? To be kicked out for trying to sell something that they do not know they need, or to be invited in to help them buy something that they know they want.

But I don't want all of this to create the impression that industrial lighting is not a load builder in its own right. The opportunity to find new load from this source actually exists.

I would expect your immediate reaction to be, "Show me!" That was Power Salesman John Smith's immediate reaction to the load building character of industrial lighting.

John's reaction was natural because, after all is said and done, he was religiously and conscientiously trying to do his job to the best of his ability so that his value to his company would go up as fast as pssible. Sure, he wanted to earn as much money as he could; he wanted a better home, more of the pleasures of living for his wife and two kiddies. But building load by adding industrial lighting just sounded like fishing for minnows when the water was full of whales.

But, on request from his boss, he went out to find what conditions he could expect and what opportunities he had for building load by this method.

The first plant that he visited fabricated ornamental iron. It was a small plant, less than 10,000 sq. ft. Notice that he determined the connected lighting load as he found it and made a revised layout and new recommended connected load. After evaluating these two factors, he found that he could probably expect an increase in revenue from this customer of $100 a year, which is small, isn't it? But even though the $100 looks small, it represents a 297 per cent increase in the revenue from lighting itself.

LIGHTING SURVEY
— or —
12 INDUSTRIAL PLANTS

Plant	Type of Industry	Area Sq. Ft.	As Found Connected Load Kw.	As Found Connected Load Revenue	As Recommended Connected Load Kw.	As Recommended Connected Load Revenue	Prospective Increase In Revenue	% Increase In Revenue
1	Ornamental Iron	9,298	9.20	$ 30.00	12.90	$ 130.00	$ 100.00	297%
2	Architectural Sheeting	27,340	26.30	500.00	35.40	570.00	70.00	14%
3	Envelopes	21,650	6.30	200.00	20.40	560.00	360.00	188%
4	Dresses	13,048	4.25	80.00	17.30	330.00	250.00	305%
5	Laundry	8,782	5.75	220.00	14.25	870.00	250.00	78%
6	Thermostats	35,950	22.30	450.00	46.80	1,010.00	560.00	124%
7	Newspaper	15,992	12.55	1,280.00	21.65	1,890.00	610.00	47%
8	Pottery	186,800	16.45	430.00	111.20	2,430.00	2,000.00	467%
9	Glass	40,820	11.10	300.00	49.70	720.00	520.00	251%
10	Valves and Fittings	655,375	238.15	4,890.00	672.20	12,350.00	7,460.00	153%
11	Steel Fabrication	76,075	30.40	800.00	81.35	2,030.00	1,230.00	153%
12	Foundry	71,275	20.45	610.00	56.10	1,240.00	630.00	105%
	Total		403.20	$9,790.00	1,139.25	$23,830.00	$14,040.00	143% Avg.

Average Increase in Revenue $1,170.00 per year

Fig. 1

His next stop was an architectural sheeting plant. Here he finds a connected load of 26.3 kw and recommends 35.4 kw. But after figuring it all out and recommending the proper use of this lighting, he has only a $70 per year increase in his revenue which represents 14 per cent increase. Pretty well lighted plant, that one. Can't do much with it.

Next he goes to an envelope plant. Couldn't call that one good. Only 6.3 kw connected. He recommends 20.4, which will produce an increase in revenue of $360 per year, or an 188 per cent increase. Notice here the comparison of the size of this plant with that of the first. It is about twice as big but will produce about four times as much revenue increase.

John visits a textile plant next. The whole plant again is only 13,000 sq. ft. But in the 13,000 sq. ft. were only 4.25 kw connected load for sewing, washing, ironing and shipping dresses. He recommends 17.3 kw and expects to obtain $250 increase, or 305 per cent more revenue from lighting.

Next is a laundry. The recommendation would mean an increase of revenue of $250 or 78 per cent. He next goes to a thermostat plant. Now there is one place where lots of lighting should be used—fine work both on the machines and assembly. Notice that this is the biggest plant so far, practically 36,000 sq. ft. The connected lighting load is only 22.3 kw and his recommendation was 46.8. The increase would be worth $560, or an increase in revenue of 124 per cent.

Next was a newspaper plant. Lots of places in the newspaper plant where good lighting is needed. This one showed a possible revenue increase of $610, or 47 per cent.

Then on to a pottery. This is a fairly good sized one—187,000 sq. ft. In all this space there was only 16.45 kw connected load. Most of this was in small 25 watt, unshaded fixtures. Proper recommendation he thought was 111 kw of lighting. Out of this recommendation he expected $2,000 new revenue, or an increase of 467 per cent.

Next one—a glass manufacturer. Notice the recommendation is four times the installation found. At a prospective revenue increase of $520, or 251 per cent.

Then to a valve and fittings plant. This is the only big plant in the survey—655,000 sq. ft. The connected load at this plant was 238 kw. His recommendation—672 kw, an increase three times what he found. This job showed revenue possibilities of $7,460, or an increase of 153 per cent.

Next, a steel fabrication plant shows a revenue possibility of $1,230, or an increase of 153 per cent.

The last that he visited was a foundry

Fig. 2—Relighted plant of a steel fabricator

with an area of a little over 71,000 sq. ft. Here the lighting load was found to be 20.45 kw and the recommendation, 56.1 kw. Revenue possibilities for this increase—$630, or an increase of 105 per cent.

When we add all of this up we get in Fig. 1 a pretty concise picture of what John found. In the 12 plants, he had found a connected lighting load of 403 kw. Near as he could estimate, this connected load was producing a revenue of $9,790 a year. His recommendation for the entire 12 plants was a connected load of 1,139 kw. And this he figured would produce a revenue of $23,830 per year. A $14,000 increase from these 12 plants, an average increase of 143 per cent—an average increase in dollars revenue from the 12 customers of $1,170 per year.

One of the surprising things about this table is that John Smith made this survey in 1930. You would criticize his layouts today. He used 500 w units very sparingly. 300 w was the biggest common recommendation even where high bay units were called for. In 1930, John didn't have many of the new fixtures that are available today nor did he have the knowledge on lighting which has been given us by the research and engineering study of the past five years. I am sure you would agree with me that were we to do exactly this same thing today we would probably double the figures in John's report.

Now here is another case. Figure 2 shows part of the relighted plant of a steel fabricator. A total of 80 kw in lighting was added from 1935 to 1938. It's a nice looking job, isn't it? But more interesting still is the story of what happened to their use of electricity.

Figure 3 is a chart of their kilowatt hour usage for five years. Average use of power is represented by the dash lines in the top curve, and of lighting by the dash lines in the bottom curve. You will note, although the power averages remain at about the same level, that the lighting averages have gone up remarkably. Actually the increase is 330 per cent in kilowatt-hour usage. Here is a case where the salesman, rather than come home with nothing in the bag, came home with lighting as a means for load building.

Gentlemen, wouldn't this tend to indicate that there is a real possibility for the power salesman to increase his value to his customers and his company through the promotion of lighting?

After my first experience in industrial lighting, I was surprised to find how few tools were really needed to promote it. Briefly, here's what I found I needed and wanted—a data book—a catalog and a light meter.

These aren't the only data available but they are the ones which appeal to me. In them I found everything that I needed for the ordinary job, all of the highly technical information boiled down so that it was usable. Moreover, it was set up in such a way that I had no fear in bringing it out on my customer's desk and asking him to do the figuring with me. It is surprising how quickly he picked it up. It is surprising how much more interested he was when he helped the doing of the job.

And the light meter—need I say anything about it? We've all had experiences with its use. We know the interest it creates and the impression and desires that our customers get when they actually see the conditions under which

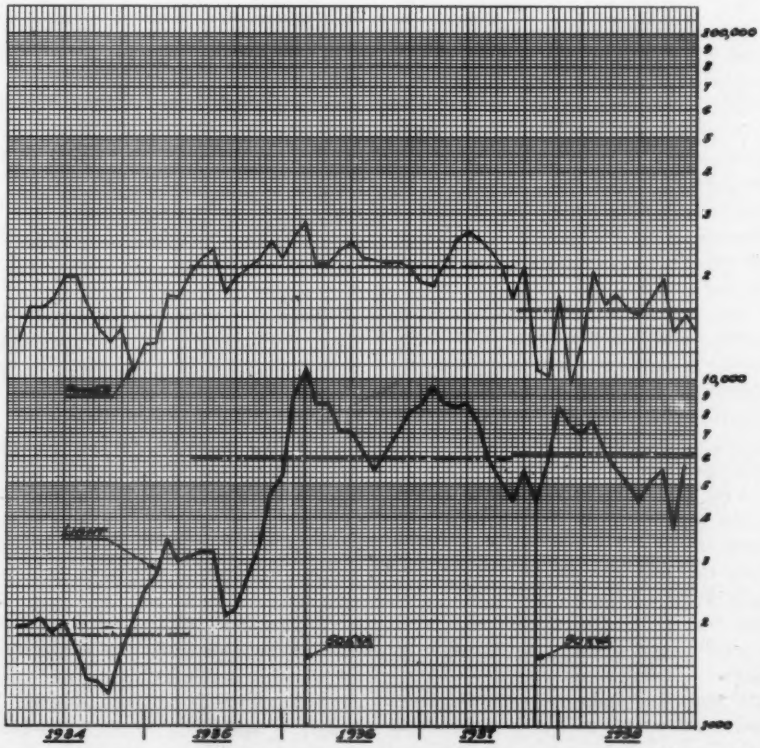


Fig. 3—Kilowatt hour usage of steel fabricating plant for five-year period

they are working. But when John Smith made his original survey, the best instrument he had was the old grease spot photometer. You no doubt have had experience using it. You know the troubles that John had. Nobody can question where the pointer of the light meter stands as they did question which grease spot compared with the lighting in a given area. There are not many things which we promote today that can be presented to our customers as clearly and as concisely as our story on industrial lighting.

Another reason why industrial lighting is easy to promote is the fact that John Smith is backed up by five or more years of the finest kind of advertising. Who doesn't know of the I.E.S. lamp? Many of the plant men that we will contact have heard through their wives or have actually attended a home lighting demonstration. Many of them have seen demonstrations of school lighting or have read considerably about it in their home town newspaper. They have seen commercial establishments relighted and noticed the effect of good lighting on customers who come into these stores. They have been bombarded by editorials and feature stores in newspapers, magazines and trade journals.

And now we have the glorious lighting of the New York and San Francisco Fairs which will be talked about and remembered for years.

Our customers know the story of light, they want good light, and they'll listen when we tell them about it. Wouldn't it appear then that since the load exists, since we have the tools to promote it and since it has had such good advertising that it is a good load builder for us?

And who can more logically promote lighting than the power man? By promoting it he is accomplishing not only direct load growth but developing new opportunities in heating, ventilating, materials handling, air conditioning, or what have you.

You, I am sure, are interested in maximum number of good sales at a minimum of cost. To deny the power salesman the privilege of promoting good light detracts from his ability to produce best results. It can be made to serve as a swell door opener for many other loads.

I feel that industrial lighting as a power salesman's tool is a natural, not only because it provides new load and new revenue but also because it creates opportunities to find other prospective loads which will produce still more new revenue. It convinces our customers of our interest in helping them to obtain the best plant operating conditions. It can be signed on the dotted line with a minimum of effort.

And that, gentlemen, is why I believe that—Industrial lighting IS the finest TOOL that a power salesman can have in his bag of tricks for building load for his company's lines.

Don't you agree?

Fitting Advertising

(*Continued from page* 176)

periodical programs, publications, special campaigns, etc. This, so far as we are concerned, is by way of being a Godsend toward keeping things orderly in an advertising office.

Last year we attempted what to us is something new, but which to many of you, I know, is an old idea. We are attempting a customers' appliance survey. Considering the nature of the area we serve—that is, a widespread suburban and country territory surrounding but not including a large metropolitan center—this was a major departure. It was the result of a realization by our sales promotion people—aided and abetted by several others—that if we were to intelligently sell in this great market year after year, we must know more about it. We faced the example that many of you set for us of good appliance surveys that worked, and the bad example that many others had set of surveys that had petered out. We went at it objectively and paid our salesmen $20 to bring in 85 customer survey cards a month.

The plan is now about 15 months old. Since the first of this year we have been paying only $10 a month for the same number of surveys and are getting the same results in information.

We now estimate that our customers are about two-thirds covered by this canvass, which means that in some areas the canvass is complete and we are starting back over them again, while in other more concentrated areas we still have not made the rounds.

We are much pleased with the usefulness of the information we are receiving. While this is not a talk on our survey system, which is another subject, you may find something worth remembering in the fact that we are trying it and that we are still believers in its effectiveness for a sound approach at promotion objectives, in spite of much grief in getting it taken seriously by those in the industry who think anything as objective as this is a waste of time.

You can imagine the amount of waste in advertising (particularly direct-mail) which can be eliminated when this survey covers our whole territory. We are planning now on a system for addressing advertising from these cards, sorted into prospect groups. Of course, even without this addressing facility, we are using the survey for many sales promotion purposes and finding it immensely valuable.

I think it is worth stressing the fact that sales do not exceed the quotas by very much. In other words, our quotas and our promotions seem reasonable, and worth working toward. That, to me, is important in sales promotion efforts. The psychological effect of a goal that is within reason is, in my opinion, a greater incentive to a sales group than that of one which represents a fond ambition of the management but which is beyond all possibility of accomplishment.

I should like again to say that I claim nothing we are doing is either airtight or very original. These methods, and my plea for a year-around merchandising plan as an advertising base, are simply the result of necessity we have found in our own shop. If you gain one idea worth taking back with you, I, and others in our organization who have assisted in these efforts, will be more than gratified.

Meter Short Course in Florida

THE Annual Short Course and Conference on Electric Meters and Relays will be conducted May 1 to May 5 inclusive, by the College of Engineering, University of Florida, Gainesville, Florida, in conjunction with the Southeastern Metermen's Association. Utilities and Municipalities of the Southeast expect this conference to be most instructive and beneficial. New technical developments and the increasing exacting demands of the industry present problems of great importance to the metermen and relay operator. The major part of the discussion will be devoted to the analysis and solution of these problems.

Further information about the course and program may be obtained from Professor E. F. Smith, Department of Electrical Engineering, University of Florida, Gainesville, Fla.

The June Convention of the Institute

It is urged that all who plan to attend the E.E.I. Convention in New York, June 6-8, make hotel reservations at the earliest possible time, since there is every indication that desirable accommodations will be difficult to secure if reservations are not made promptly.

The Institute has been able to make a general reservation for a limited number of rooms at several hotels, for the convenience of Convention delegates. The period for these block reservations will expire in advance of the Convention, and for this reason, individual reservations should be made as promptly as possible.

Individual reservations for such rooms must be confirmed by the delegates, using the regular hotel circular mailed to member companies, through the reservation blank printed herein, or by letter, specifying attendance by the writer at the E.E.I. Convention.

The hotels where these general reservations are being held are the Belmont Plaza, the Biltmore, the Commodore, the Lexington, The New Weston, the Roosevelt, the Shelton, and the Waldorf-Astoria. All are in the neighborhood of the Waldorf-Astoria, where the business sessions of the Convention will be held.

These and other mid-town hotels are listed on the next page with types of accommodations offered and rates.

A GOOD program is fundamental to the success of any Convention. The program for the Institute's Seventh Annual Convention to be held in New York, June 6-8, inclusive, is outstanding in every respect. At each session there will be speakers who are authorities in their fields and whose points of view are of the utmost importance to the industry.

Three general sessions will be held at the Waldorf-Astoria Hotel, one each on Tuesday, Wednesday and Thursday mornings, a luncheon meeting on Thursday, June 8, at the same hotel, and the afternoon session at the World's Fair, the opening day of the Convention.

The presidential address by Mr. Kellogg will be the first event of the Tuesday morning session, which will begin promptly at 9:30.

The electric industry is vitally interested in information that will indicate the trend of building and real estate development for both residences and industry. As a real estate economist of wide experience, Mr. Roy Wenzlick, President, Real Estate Analysts, Inc., St. Louis, who will follow Mr. Kellogg, is highly qualified to analyze The Outlook for Real Estate and Business Development.

Mr. Floyd L. Carlisle, Chairman, Consolidated Edison Company of New York, Inc., and affiliated companies, will be the next speaker. As the head of New York State's greatest public service organization his address on The Outlook for the Electric Utilities will be of significance to both the industry and to the investing public.

The Wednesday morning session will begin at 10 o'clock with the election of Trustees of the Institute. As an executive of a company that has been notable in its thoughtful and direct methods in the promotion of its rural electrification program, Mr. H. E. Dexter, Central Hudson Gas and Electric Corporation, and Chairman of the General Sales Committee, E.E.I., will tell of Progress in Building Rural Load, both in relation to his own organization and nationally.

War Procurement and Electric Power Supply will be the subject of General Charles Keller, Public Utility Engineering and Service Corporation. This address will comprise a review of the national defense situation and a discussion of the power supply aspect in the event of hostilities. General Keller's background as a general officer of the U. S. Corps of Engineers, and as a public utility executive, places him in an author-

Application for Hotel Accommodations

Seventh Annual Convention, Edison Electric Institute

NEW YORK CITY, NEW YORK

June 6, 7 and 8, 1939

Please reserve the following:

.....DOUBLE ROOMS WITH BATH $.....PER ROOM

.....SINGLE ROOMS WITH BATH $.....PER ROOM

1st CHOICE.....HOTEL

2nd CHOICE.....HOTEL

3rd CHOICE.....HOTEL

PLEASE INDICATE BELOW OR IN LETTER THE NAMES OF PERSONS TO WHOM ROOMS SHOULD BE ASSIGNED.

Name	Date	Hour of Arrival	A.M. or P. M.	Date of Departure

Name .....

Company .....

Address .....

IMPORTANT

First, second and third choices of hotels should be indicated on the application blank which should be MAILED DIRECT TO THE HOTEL OF FIRST CHOICE. If such Hotel cannot furnish the desired accommodations, it will immediately forward the application to the Hotel of Second Choice, etc. All hotels have been instructed to acknowledge all reservations directly to the persons applying for them.

itative position to discuss this vital subject.

Mr. George E. Whitwell, Vice-President, Philadelphia Electric Company, and one of the industry's foremost sales executives, will follow General Keller with a discussion of Balanced Load Building, one of the most vitally important problems facing the industry today. The concluding event at this session will be an entertaining talk and demonstration by Mr. C. M. Ripley on The Work That a Kilowatthour Can Do.

RATES QUOTED BY NEW YORK CITY HOTELS

for the 1939 Edison Electric Institute Convention

June 6, 7 and 8, 1939

RATES BY THE DAY - EUROPEAN PLAN

Hotels and Locations	Single Rooms with bath	Double Rooms with bath	Suites
Ambassador 51st and Park Avenue	—	$12.00	$16.00 - $18.00
Astor Broadway and 44th Street	$3.50 - $ 5.00	6.00 - 8.00	9.00 - 15.00
Belmont Plaza Lexington Avenue and 49th Street	4.00 - 5.00	6.00 - 7.00	10.00 - 16.00
Beverly 125 East 50th Street	4.00 - 7.00	8.00 - 10.00	12.00 - 24.00
Biltmore Madison Avenue and 43rd Street	7.00 - 14.00	9.00 - 16.00	20.00 - 25.00
Commodore 42nd Street and Grand Central Terminal	4.00 - 6.00	6.00 - 10.00	12.00 - 20.00
Delmonico Park Avenue and 59th Street	5.00 - 7.00	7.00 - 9.00	10.00 - 14.00
Gladstone 114 East 52nd Street	7.00 - 8.00	10.00 - 12.00	10.00 - 25.00
Lexington Lexington Avenue and 48th Street	—	8.00	12.00 - 15.00
New Weston Madison Avenue and 50th Street	6.00	9.00	—
New Yorker Eighth Avenue and 34th Street	4.00 - 5.00	6.50 - 8.00	8.00 - 20.00
Park Central Seventh Avenue and 55th Street	4.00	7.00	8.00 up
Park Lane 299 Park Avenue	6.00 - 7.00	9.00 - 10.00	12.00 - 21.00
Pennsylvania Seventh Avenue and 33rd Street	3.50 - 8.00	5.00 - 10.00	12.00 - 15.00
Plaza Hotel Fifth Avenue and 59th Street	7.00 up	9.00 up	15.00 up
Prince George Fifth Avenue and 28th Street	2.50 - 5.00	3.50 - 7.00	8.00 - 10.00
Roosevelt Madison Avenue and 45th Street	6.00	8.00 - 9.00	15.00 up
St. Regis Fifth Avenue and 55th Street	7.00 - 9.00	10.00 - 14.00	20.00 up
Shelton Lexington Avenue and 49th Street	5.00	8.50	—
Sherry-Netherland Fifth Avenue and 59th Street	—	—	18.00 - 35.00
Vanderbilt Park Avenue and 34th Street	4.50 up	8.00 up	10.00 up
Waldorf-Astoria Park and Lexington Avenues 49th and 50th Streets	7.00 - 12.00	10.00 - 15.00	15.00 - 25.00

The Thursday morning session will open at 10 o'clock with a presentation of the Prize Awards administered by the Institute. Mr. H. P. Liversidge, Chairman of the Prize Awards Committee will officiate at these ceremonies. The prizes to be awarded are: the B. C. Forbes prize, James H. McGraw Prizes, R. B. Marshall Prizes, Claude L. Matthews Valor Awards, Augustus D. Curtis Award, National Electric Water Heating Council Award, and the senior award, the Charles A. Coffin Medal.

Research in connection with *Fortune's* Survey of Public Opinion, and similar activities for many business organizations, places the next speaker, Mr. Elmo Roper, Distribution Consultant, in an advantageous position to tell of the mechanics and practical aspects of Keeping Up With Public Opinion.

It has been intimated that the electrical industry has been on the defensive so much in the past few years that we need to have the selling points of our own service, as opposed to isolated plants, more vigorously championed by our top flight executives. As the chief executive of the American Gas and Electric Company, highly successful in the competitive field, and an engineer and administrator of wide experience, Mr. George N. Tidd will present The Case for Central Station Power.

The concluding speaker at this session will be Dr. Adam S. Bennion, Utah Power and Light Company, whose subject is Human Inter-Dependence. Dr. Bennion has been notably successful both in carrying out in his own company and delineating to many utility and business meetings, his views on humanizing the industry and gaining better employee understanding and cooperation.

Additional speakers and events for the above sessions will be announced later.

. . .

Combined with the speaking program will be a remarkable and impressive series of exhibits, representing all branches of the electrical industry, presented on a scale more comprehensive than ever before possible. Some of these exhibits—at the New York World's Fair—have been described briefly in previous issues. Especially important to the delegates are the exhibits representing the utility division of the industry—Forward March of America and the Electrified Farm, sponsored by the electric utility industry as a whole, the exhibit of the Consolidated Edison Company of New York, the General Electric

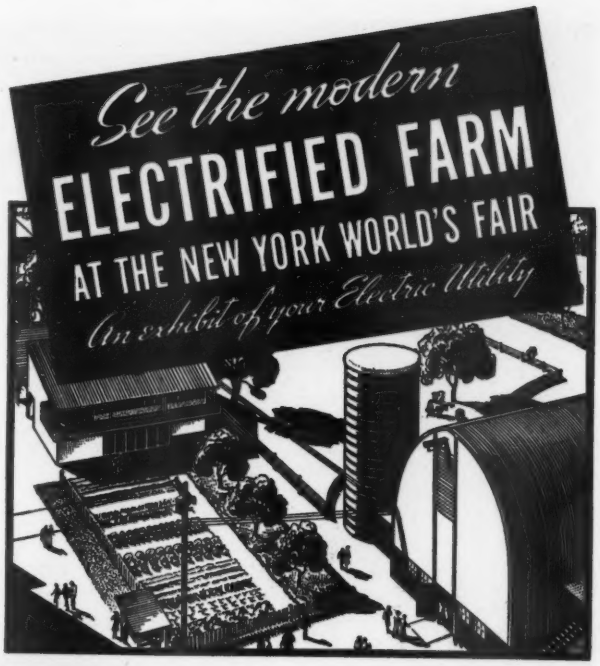
(*Continued on page* 207)

To Help Your Customers See the New York Fair

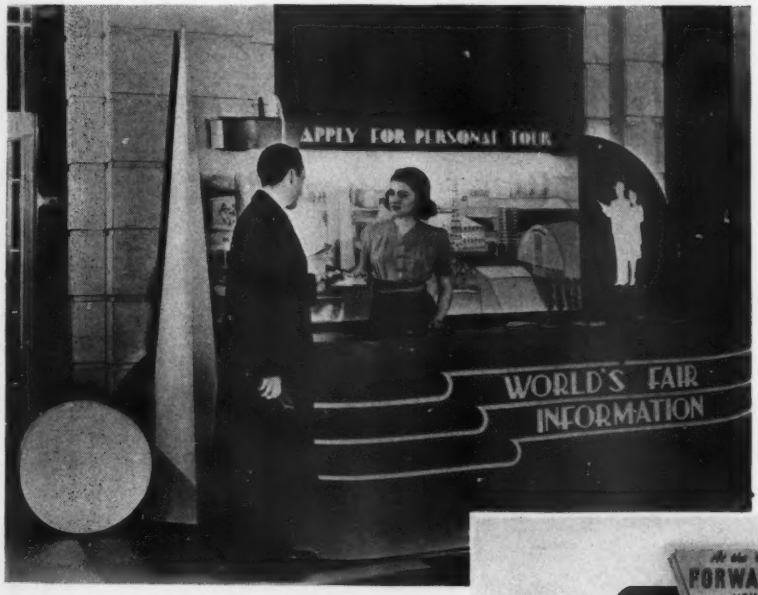
THE exhibits of the Electric Utilities Exhibit Corporation at the New York World's Fair 1939 have been planned and created to represent the entire industry. From whatever section of the country they come, visitors who see its buildings and displays may well say: "This is the story of our electric company back home!" And it will not be surprising if many of them add: "For the first time I understand just what they are really doing for us!"

Every contributing utility company, wherever located, is privileged to take advantage of the opportunity to tie in its own story with the World's Fair exhibits, and make certain that all people from its community who visit the Fair will see the Electric Utilities Exhibits and bring back the story to their neighbors.

To help each company do this, there has been prepared a complete promotional program based on the slogan: "Visit the Forward March of America," designed to make it perfectly clear that the local utility is represented at the Fair and that the Electric Utilities Exhibits actually do represent "the power company back home."

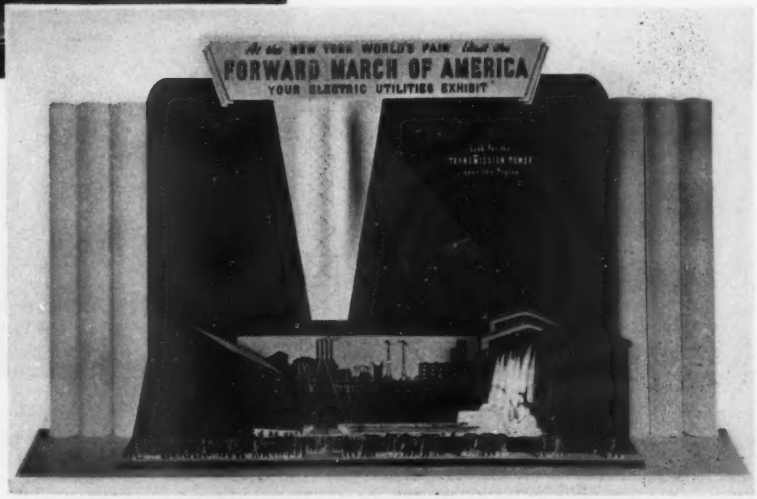


Above is reproduction of a cut for newspaper advertising. Cuts of "Forward March of America" are also available



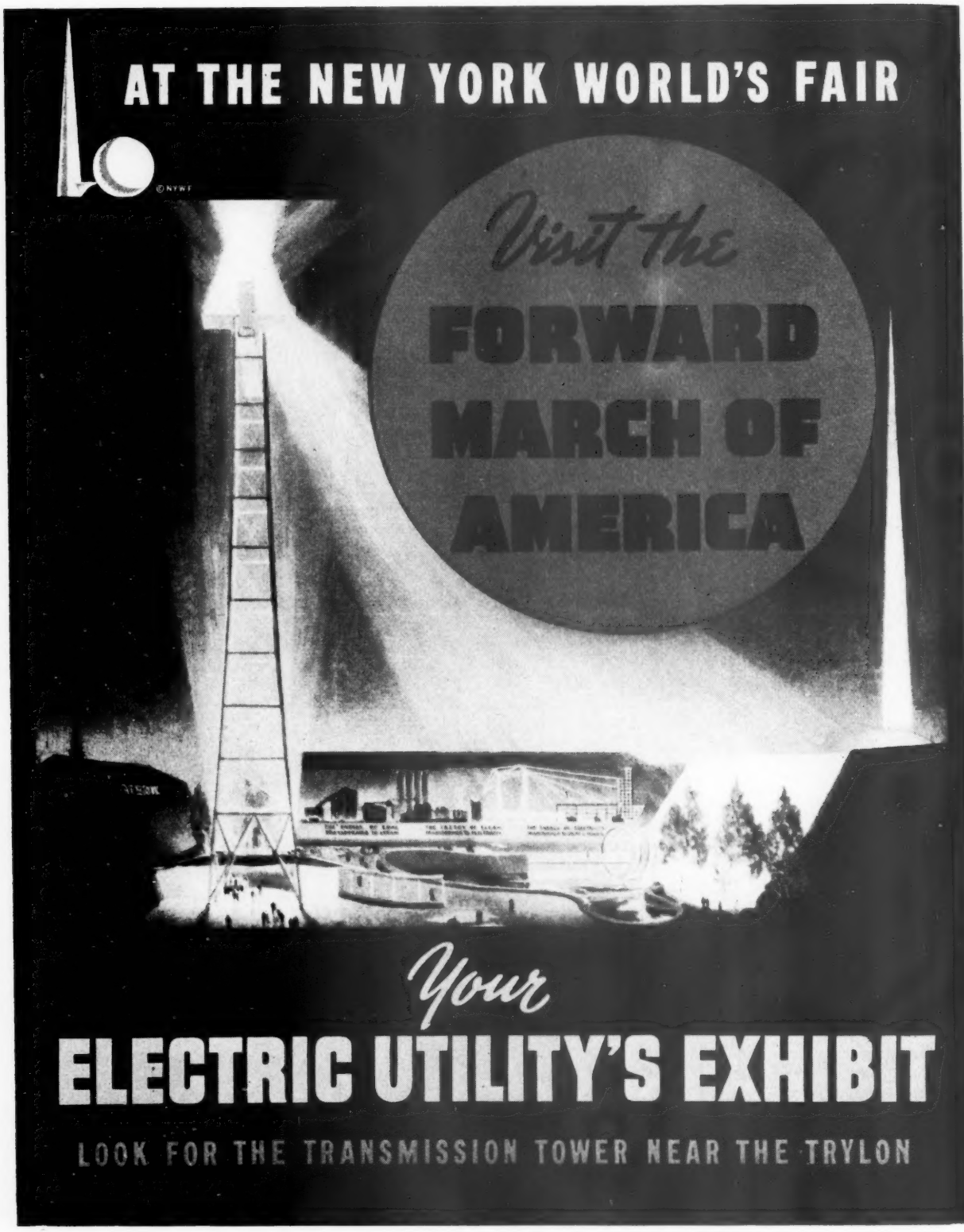
At the left is a photograph of a World's Fair information booth located in a main office of a power company. Many companies are expected to have similar information centers

Below is a reproduction of a window display, complete for installation



Effective promotional material is available to contributing companies at cost. All may be used throughout the entire period of the Fair, and several can be readily adapted to other uses later.

The poster reproduced on the next page is typical of the design used in most of the promotional material. This material except for newspaper cuts is printed in four color. The promotional material now ready for use is listed on page 203. It includes an effective and varied assortment, among which every participating company should find a number of items adaptable to their own use. It is hoped that all companies will make liberal use of these materials.



Reproduction of a four-color poster available to companies supporting the Utilities Exhibits. The design is typical of that used on The Forward March of America promotional literature

QUICK FACTS ABOUT THE FAIR

Opening date: April 30th, 1939.

Place: Flushing Meadows, Queens, New York City.

Cost: $150,000,000—as compared with Chicago Fair $80,000,000 and Paris Exposition $60,000,000.

Size: 1216 acres—as compared with Chicago Fair 424 acres and Paris Exposition 250 acres.

Amusement: Two-mile Amusement Zone with "fun room" for 350,000.

Buildings: Over 200. The Trylon is taller than the Washington Monument. The Perisphere, giant round companion to the towering Trylon, is itself as high as an 18-story building—its interior exhibit space is twice as large as the Radio City Music Hall.

Hours: 9 A.M. to 10 P.M. in Exhibit Area.
9 A.M. to 2 A.M. in Amusement Area.

Sponsorship: About 60 foreign nations, U. S. Federal Government, State governments, and New York City. The Fair Corporation is expending $30,000,000; private, domestic and foreign exhibitors $70,000,000; Federal Government, New York State and New York City $50,000,000.

HOW TO GET TO THE FAIR GROUNDS

By Automobile

It is easy to get around Manhattan when you know that the streets are numbered consecutively from South to North and the Avenues from East to West. Two good routes to follow in reaching the Fair from Manhattan are: (1) Cross the Triborough Bridge (toll) at 125th Street and 2nd Avenue, and follow Grand Central Parkway to the Fair. (2) Cross the Queensborough Bridge at 59th Street and 2nd Avenue, and follow Northern Boulevard (Route 25A) to the Fair, or follow Queens and World's Fair Boulevards to the site. Thousands of directional markers throughout New York displaying the Trylon and Perisphere will guide motorists to the exposition.

The City is installing thousands of amber lights to mark the best highways to the Fair grounds. In driving to the Fair, keep the lights on your right; in returning, keep them on your left.

3 Subway Systems Offer Quick Transportation to Fair Grounds

There are three subway systems operating in New York City. Stations for these systems are located within a few blocks of each other all over the city. You can identify them as follows:

The Independent Subway—Stations marked "Independent."

The Interborough Rapid Transit Company—Stations marked "IRT."

The Brooklyn-Manhattan Transit Company—Stations marked "BMT." Any subway station in New York City will afford connections to the Fair Grounds. Ask the subway guards where to transfer.

The "IRT" will operate direct express trains from Times Square (42nd Street and 7th Avenue) and Grand Central Station (42nd Street and Lexington Avenue).

The "Independent" will operate trains from the Pennsylvania Railroad Station at 34th Street and 8th Avenue; and from Times Square district at 42nd Street and 8th Avenue.

The "BMT" will operate trains from the Times Square and Downtown Manhattan areas which will connect with BMT World's Fair-Flushing line trains at Queens Plaza station where there is free transfer between trains.

Long Island Railroad

The Long Island Railroad station is part of the Pennsylvania Station at 34th Street and 7th Avenue. Express trains will run to the Fair in ten minutes for ten cents.

Bus Lines

Regular bus lines operating from Manhattan, Bronx, Brooklyn and Long Island will take visitors to the Fair, and provisions will be made to unload and load passengers at various bus terminals located on the east and west sides of the Fair Grounds.

Don't hesitate to ask police officers or subway employees to direct you.

Railroad Rates Reduced

Trunk Line Association of New York and Central Passenger Association of Chicago have announced special rates for World's Fair visitors. The former, a person customs, the base will be the rate to be charged per mile. First class rates get down as low as 2.43c for distances over 950 miles.

Living Accommodations in New York City

The hotels of New York City are famous throughout the world. They have all made special arrangements to care for the millions who will throng the metropolitan area for the Fair.

The American Express Company, in connection with the Railroads in America, has reserved 15,000 rooms per day in hotels in New York to accommodate persons who take their all-expense rail tours to the Fair. These tours are based on spending from two to seven days in New York, and include railroad tickets to New York, taxi transfer to the hotel, hotel accommodations, admission tickets to Fair Grounds, sightseeing trips in New York and taxi service to departing train. The company will maintain service stations at all railway terminals. Arrangements for all-expense rail tours can be made through any railroad ticket agent, American Express office or other travel agency.

Registered Rooms, Inc., has available thousands of rooms, other than hotel rooms. They are located in residence clubs, apartment buildings, and private homes. Therefore, prices are proportionately moderate. You can secure complete information and reservations at any Postal Telegraph office in your own city.

Thos. Cook & Son, Inc., offers from 3- to 7-day tours to the Fair, including transportation to the Fair from Pennsylvania Station, admissions to the Fair Grounds, sightseeing trips in New York, hotel accommodations, and transfers by taxi from station to hotel on arrival, and from hotel to station on departure. Make reservations at any Thos. Cook office.

In addition, your local travel agent will undoubtedly have information on other accommodations and all-expense tours, so that you will have a wide range of prices and accommodations from which to choose.

The Council of the City of New York has enacted a special law for the licensing of rooming houses. Thousands of rooms are inspected and when they meet rigid standards of safety, sanitation, etc., they are listed by the central housing bureau. Inquiries concerning housing should be sent by mail to the Department of Housing and Welfare, New York World's Fair 1939, World's Fair, New York.

Whether you plan to stop at a hotel, or whether you want to get lower-cost accommodations, it is important that you make definite arrangements *before you go to New York.*

Costs at the Fair Itself

All Industrial Exhibits are FREE!

Admissions to the Fair Grounds will be 25c for adults—10c for children. No charge will be made for admission to the industrial exhibits. The concessions will vary in admission prices, but will run about the same as any amusement park. Light refreshments—beer, soft-drinks, sandwiches—will be about the same prices you pay at ordinary lunch counters. Because of the many restaurants on the grounds you will be able to get meals for almost any price you want to pay.

Parking facilities for 35,000 cars will be provided near the Fair Grounds. All day parking costs 50c.

Electric Utilities Exhibits Promotional Material

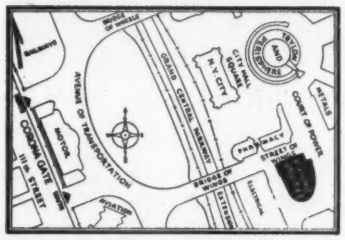
A flasher lamp, carrying the design of the Theme Center—Trylon and Perisphere. This can be used in windows and on counters to advertise your company's part in the Fair.

Bill inserts. An old device, but always effective when suitable material is used, and these are particularly attractive in striking colors and with a bold message.

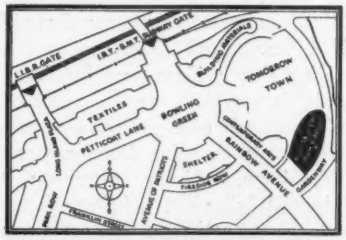
"Helpful Suggestions to New York World's Fair Visitors" folder. An impressive mailing piece for customers, with return card addressed to your company, telling you who is going to the Fair and what they want to see. Electric Utilities Exhibit Corporation will prepare a special Personalized Tour of the Fair for each person filling out one of these cards, showing them how to see the things they are looking for in the shortest possible time. The Tour will be given to them at the Personal Service Bureau in the "Forward March of America."

Where to get your

PERSONALIZED MAPPED TOUR



The above map indicates the location of FORWARD MARCH OF AMERICA, the Electric Utility Industry's exhibit at the World's Fair. This is where you get your free personalized tour. The building is located about 350 yards from the Theme Center of the Fair (the three-sided tower and huge ball called the Trylon and Perisphere). It can be identified by the transmission tower which stands directly before the entrance to the exhibit.



Another interesting exhibit of the Electric Utility Industry at the New York World's Fair is the Electrified Farm, located near the Home Building Center (Tomorrow Town). It offers a wealth of information to anyone interested in any form of farming or agriculture. It is the first complete working farm ever shown at a World's Fair. A thorough education in the uses of electricity on the farm!

Correspondence sticker. Bright and interesting; well-designed, with the "Forward March of America" strikingly set forth.

Electrotypes, similar in design to the stickers, but designed for imprinting on envelopes and for similar uses.

Advertising cuts, in one and three column sizes, showing the "Forward March of America" building and "The Electrified Farm." Copy suggestions are included.

Window displays, complete and ready to install.

Counter cards, carrying the sticker design in suitable size.

Complete set of plans for constructing your own Information Booth on your sales floor, where visitors to your office may obtain first-hand information about the Fair.

Inquiries concerning this material should be addressed to Electric Utilities Exhibit Corporation, Rand Building, Buffalo, New York.

Send this card for a* FREE *personalized Fair tour

Please check subjects of interest to you:

1. Fine Arts		15. Science	
(a) Painting	☐	(a) Medicine and Public Health	☐
(b) Sculpture	☐	(b) Industrial and Applied Science	☐
(c) Architecture	☐	(c) Pharmacy	☐
2. Building Materials	☐	(d) Chemistry and Plastics	☐
3. Homemaking		16. Education	☐
(a) Food and Beverages	☐	17. Manufacturing	
(b) Furnishings	☐	(a) Glass	☐
(c) Household Appliances	☐	(b) Steel	☐
(d) Entertaining	☐	(c) Brass, Copper and Misc. Metals	☐
(e) Budgeting	☐	(d) Watches	☐
(f) Heating and Air Conditioning	☐	(e) Rubber	☐
4. Women's Fashions	☐	(f) Cigars and Cigarettes	☐
5. Perfume and Cosmetics	☐	(g) Distilled Spirits	☐
6. Men's Clothing	☐	18. Business	
7. Jewelry	☐	(a) Insurance	☐
8. Photography and Motion Pictures	☐	(b) Banking	☐
9. Gardening	☐	(c) Business Systems	☐
10. Religion	☐	(d) Production and Distribution	☐
*11. Sports	☐	19. Natural Resources	
12. Textiles	☐	(a) Oil	☐
13. Transportation		(b) Mines	☐
(a) Aviation	☐	(c) Fisheries	☐
(b) Railroad	☐	(d) Forests	☐
(c) Motor	☐	(e) Farms	☐
(d) Maritime	☐	20. Service Industries	
14. Communications		(a) Electricity	☐
(a) Telephone	☐	(b) Gas	☐
(b) Telegraph	☐	21. Electrical Equipment	☐
(c) Radio and Television	☐	*22. Foreign Countries	☐
(d) Printing	☐	23. U. S. Government	☐
		*24. State Exhibits	☐
		25. N. Y. City Government	☐
		26. Y.M.C.A.	☐

**Specify those in which you are interested.*

*Name*_____

*Street*_____

*City*_____ *State*_____

*Date: From*_____ *To*_____

Please print or typewrite name and address plainly.

Above are four pages from the "Helpful Suggestions to New York World's Fair Visitors" folder

Night view of the skyscraper masses forming the New York sky line, in Consolidated Edison "City of Light" at the Fair

"City of Light" First Major Exhibit To Be Completed At New York World's Fair

COMPLETION of the "City of Light," the first major exhibit ready for exposition at the New York World's Fair 1939, replete with 4000 buildings, third rail subway lines and underground utility networks, was announced this month by the Consolidated Edison Company of New York, Inc., and affiliated companies. Consolidated Edison officials in charge of the program include Clarence L. Law, vice-president; Harold S. Sutton, executive assistant to the chairman and Henry Obermeyer, assistant vice-president.

During the past fifteen months more than 125,000 man-hours have gone into construction of the exhibit, described as the world's largest diorama, a colored, lighted, animated architectural model of the New York Metropolitan area. Higher than a three-story building, the model is nearly as long as a city block. Its thousands of electric lights provide a constantly changing diorama spectacle, with dawn, mid-day, afternoon, twilight and full night lighting effects following one another in each performance. Midnight effects are complete even to the presence of mid-summer star constellations in the New York sky. Two hundred craftsmen, representing eighteen trades, had a hand in construction. Narration, music, sound effects and lighting changes combine to form a theatrical production which tells the story of a 24-hour period in the "City of Light" in twelve minutes. Forty-eight 12-minute performances will be given each day between 10 a.m. and 10 p.m. Under a maximum attendance schedule the diorama hall could accommodate a maximum of 38,400 visitors daily or 268,800 weekly. Designed as a theatrical production, the exhibit dramatizes the contributions of electricity, gas and steam production to life in the metropolitan area.

Through its script, entitled "City of Light," a composition by Walter Dorwin Teague and Edward Mabley, the

(*Continued on page 207*)

Program

E.E.I. Engineering Committee Meetings

Edgewater Beach Hotel, Chicago, Illinois

May 1-4, 1939

ACCIDENT PREVENTION COMMITTEE

L. M. SHADGETT, Chairman

May 1—2 p.m.—East Lounge

Joint Session with the Electrical Equipment Committee

Symposium—The Design of Substations from Point of View of Accident Prevention.

May 2—9:30 a.m.—Sheridan Room

Announcements and Opening Remarks

Minutes of Last (Tenth) Meeting

Reports on: accident statistics; public safety; traffic hazards; employee training; helmets for linemen; line hazards; national safety council affairs; affairs on AIEE Committee on Safety.

May 2—2 p.m.—Sheridan Room

Reports on: electric fences; rubber protective equipment for linemen; linemen's handbook; mechanical counter shock; employee health; principles of holdoff; low voltage hazards; office hazards.

Reports from Men Contacting Other E.E.I. Committees
Electrical Equipment Committee
Insurance and Accounting Committees
Prime Movers and Hydraulic Power Committees
Transmission and Distribution Committee

May 3—9:30 a.m.—Sheridan Room

"Protective Equipment for High Voltage Lines"—(Motion Picture Film and Paper)
R. M. RUTH, Northern States Power Company, Eau Claire, Wis.

"Pole Top Resuscitation"—(Motion Picture Film and Discussion)
E. W. OESTERREICH, Duquesne Light Co., Pittsburgh, Pa.

Radio Aerial Problems
R. A. BLOOMSBURG, Niagara Hudson Power System, New York, N. Y.

New Ideas and Devices

New Business

May 3—2 p.m.—Michigan Room

Joint Meeting with Transmission and Distribution Committee

Directing Expenditures Toward Reducing Pole Line Accidents
J. W. ANDERSON, Philadelphia Electric Co., Philadelphia, Pa.

Cause and Location of Accidents
W. A. BUCHANAN, Appalachian Electric Power Co., Welch, W. Va.

Round Table Discussion of Specific Problems
NICHOLAS STAHL, Pennsylvania Power and Light Co., Allentown, Pa.

ELECTRICAL EQUIPMENT COMMITTEE

H. L. WALLAU, Chairman

May 1—9:30 a.m.—East Lounge

Closed Session (Only Committee Members and representatives of E.E.I. Member Companies are invited to this Session).

Oil Fire Reports
R. N. CONWELL, Public Service Electric and Gas Co., Newark, N. J.

Apparatus Troubles
C. A. CORNEY, Boston Edison Co., Boston, Mass.

San Diego Switch House Fire
H. W. EALES, Public Utility Engineering and Service Corp., Chicago, Ill.

Joint Committee on Oil Circuit Breaker Reports
R. W. WILBRAHAM, United Engineers & Constructors Inc., Philadelphia, Pa.

Insulating Oils Report
H. S. FITCH, West Penn Power Co., Pittsburgh, Pa.

May 1—2 p.m.—East Lounge

Operating and Maintenance Division

Joint Session with the Accident Prevention Committee

H. S. FITCH, Chairman

Storage Battery Committee Report
A. B. BENSON, Boston Edison Co., Boston, Mass.

Reclosing Circuit Breaker Report
E. S. FIELDS, The Cincinnati Gas and Electric Co., Cincinnati, Ohio.

Symposium—The Design of Substations From the Point of View of Accident Prevention

May 2—9 a.m.—East Lounge

Foreign Practice Group

A. V. DEBEECH, Chairman

Report
A. V. DEBEECH, Canadian General Finance Corp., Toronto, Canada.

System Engineering Division

R. A. HENTZ, Chairman

Basis of Investment for Increased System Reliability—Progress Report
S. M. DEAN, The Detroit Edison Co., Detroit, Mich.

Ratings of Apparatus for Registration Statements—Progress Report
H. C. DEARDORFF, Dayton Power and Light Co., Dayton, Ohio.

Utilization Division

J. H. FOOTE, Chairman

Utilization Voltage Terms and Definitions
STANLEY STOKES, Union Electric Co. of Missouri, St. Louis, Mo.

Facts to Be Considered in Utilization Voltage Standardization
C. E. ARVIDSON, The Commonwealth and Southern Corp., Jackson, Mich.

Progress Reports on Preferred Voltages
R. A. HENTZ, Philadelphia Electric Co., Philadelphia, Pa.

Application of Customer Owned Capacitors
F. H. COUTS, The Consumers Power Co., Jackson, Mich.

Meters and Services Division

A. E. SILVER, Chairman

Reports:
Summary of Public Utility Commission Rules;
Metermen's Handbook;
Progress of Work on Hand
A. B. CRAIG, The Boston Edison Co., Boston, Mass.

(Meter and Service Subcommittee Meetings—May 2, 3 and 4:—9:30 a.m.—West Room)

May 2—2 p.m.—East Lounge

Apparatus and Design Division

B. VAN NESS, JR., Chairman

Rotating Synchronous Machines
R. W. WILBRAHAM, United Engineers and Constructors, Inc., Philadelphia, Pa.
Two Subjects Will Be Discussed by The Manufacturers—
(a) *Short Circuit Designs and Testing*
(b) *Characteristics of 3600 R.P.M. Machines*

Station Design
H. B. WOOD, Stone & Webster Engineering Corp., Boston, Mass.

Small Outdoor 110 kv Substation
H. B. ROBINSON, Carolina Power and Light Co., Raleigh, N. C.

Generator Insulation and Testing
B. VAN NESS, JR., Pennsylvania Water and Power Co., Baltimore, Md.

Present Practices in Testing Generator Insulation—Progress Report
R. L. WEBB, Consolidated Edison Company of New York, Inc., New York, N. Y.

HYDRAULIC POWER COMMITTEE

E. B. STROWGER, Chairman

May 3—9:30 a.m.—East Room

Report on System Governing
Cooperative Use of Streams and Reservoirs
Effect of Storage Reservoirs on the Susquehanna River

May 4—9:00 a.m.—East Room

Computation of Flood Flows in the Light of Recent Investigations In This Subject
Report on Model Tunnel Tests at Rochester, N. Y. in Connection with Repairing the Tunnel of the Rochester Gas and Electric Corp.
I. G. MCCHESNEY, Test Engineer
Model Tests of Mt. Morris Dam Spillway—Motion Picture.

PRIME MOVERS COMMITTEE

W. E. CALDWELL, Chairman

May 1—9:30 a.m.—East Room

Report status of work of Subcommittee

Boilers
M. D. ENGLE, Boston Edison Company, Boston, Mass.
Chemistry
C. H. FELLOWS, The Detroit Edison Company, Detroit, Michigan.
Combustion
J. F. MUIR, American Water Works & Electric Co., Inc., New York City.
Metallurgical
H. N. BOETCHER, Consolidated Gas Electric Lt. & Power Co., Baltimore, Md.
Turbines
E. R. CROFTS, Rochester Gas & Electric Corp., Rochester, N. Y.
Oil and Gas Engines
J. M. DRABELLE, Iowa Electric Light & Power Co., Cedar Rapids, Iowa.
Power Station Data
E. H. KRIEG, American Gas & Electric Service Corp., New York City.
Report on Standardization of Socket Welding Fittings
SABIN CROCKER, Detroit Edison Company, Detroit, Michigan.
Report on Feedwater Piping Design Pressures
H. N. BOETCHER, Consolidated Gas Electric Lt. & Power Co., Baltimore, Md.

May 2—9:00 a.m.—East Room

Round Table Conference
E. L. HOPPING, Philadelphia Electric Company, Philadelphia, Pa.

TRANSMISSION AND DISTRIBUTION COMMITTEE

H. P. SEELYE, Chairman

May 2—9:30 a.m.—West Room

Meeting of Subject Committee on Underground Methods and Accessories

J. A. BROOKS, Chairman

May 3—9:30 a.m.—Michigan Room

Underground Group

C. W. FRANKLIN, Chairman

Report on Preliminary Session
J. A. BROOKS, Consolidated Edison Company of New York, Inc., N. Y.
Combined Overhead and Underground Network in Detroit
HAROLD COLE, The Detroit Edison Company, Detroit, Mich.
The Use of Cables Insulated with Corona-Resisting Compounds for Pole Riser Service
T. J. BROSNAN, Buffalo Niagara Electric Corp., Buffalo, N. Y.
Cable Fault Location through Vibration Caused by Application of Steep-Fronted Wave
L. E. KLINE and C. J. SHUTTLEWORTH, The Detroit Edison Company, Detroit, Mich.
Neutral Conductors for Underground Distribution Circuits
W. R. BULLARD, Ebosco Services, Inc., New York, N. Y.

Transmission Group

MERRILL DEMERIT, Chairman

Some Parts that Transmission Lines Play in the Operation of Bulk Power Supply Systems
MERRILL DEMERIT, West Penn Power Co., Pittsburgh, Pa.
Operation Report of Protective Gaps on Transmission Lines—1938
D. M. BUNN, Northern States Power Co., Minneapolis, Minn.

May 3—2:00 p.m.—Michigan Room

Joint Meeting with Accident Prevention Committee

Closed Session (Representatives of Power Companies Only)

Directing Expenditures Toward Reducing Pole Line Accidents
J. W. ANDERSON, Philadelphia Electric Co., Philadelphia, Pa.
Cause and Location of Accidents
W. A. BUCHANAN, Appalachian Electric Power Co., Welch, W. Va.
Round Table Discussion of Specific Problems
NICHOLAS STAHL, Pennsylvania Power and Light Co., Allentown, Pa.

May 4—9:00 a.m.—Michigan Room

Plant Coordination Group

W. F. DAVIDSON, Chairman

Coordination of Rural Power and Telephone Lines
H. E. KENT, Edison Electric Institute, New York, N. Y.
Bonding of Telephone Cables to Power Neutrals and Street Lighting Brackets
J. O'R. COLEMAN, Edison Electric Institute, New York, N. Y.
Sodium Vapor Lighting
H. E. KENT, Edison Electric Institute, New York, N. Y.
Size of Poles for Joint Use
A. B. CAMPBELL, Edison Electric Institute, New York, N. Y.
Radio Interference
M. D. HOOVEN, Public Service Electric and Gas Co., Newark, N. J.
(The balance of this session will be closed to all except representatives of power companies.)

Overhead Distribution Group

W. F. NIMMO, Chairman

Summary of Replies to the Questionnaire: Bare Wire versus Covered Wire for Aerial Construction
P. H. CHASE, Philadelphia Electric Company, Philadelphia, Pa.
Burn-off Characteristics of Conductors
J. A. TENBROOK, Philadelphia Electric Company, Philadelphia, Pa.
W. E. GUNDLACH, Wisconsin Electric Power Company, Milwaukee, Wis.
Discussion of the Revision of the National Electrical Safety Code

May 4—2:00 p.m.—Michigan Room

Standards and Specifications Group

E. V. SAYLES, Chairman

Progress Reports
(a) Distribution Transformer Standardization
A. E. SILVER, Ebasco Services, Inc., New York, N. Y.
(b) Timber Products
L. G. SMITH, Consolidated Gas Electric Light and Power Co., Baltimore, Md.
Moisture Content in Poles as Related to Conditioning and Treatment
J. A. VAUGHAN, Southern Wood Preserving Co., Atlanta, Ga.

Overhead Distribution Group

W. F. NIMMO, Chairman

Conductor Vibration and Fatigue
L. C. PESKIN, American Steel and Wire Corp., Worcester, Mass.
Operating Experience with Capacitors
M. C. MILLER, Ebasco Services, Inc., New York, N. Y.
Transformer Loading by the Statistical Method
M. T. CRAWFORD, Puget Sound Light and Power Co., Seattle, Wash.

DINNER MEETING OF ALL COMMITTEES

May 2—7:00 p.m.—Michigan Room

Address
N. E. FUNK, Philadelphia Electric Co., Philadelphia, Pa.

"City of Light"

(*Continued from page* 204)

diorama adds poetry to the musical, architectural and engineering arts represented by the exhibit. In step with the diorama as it undergoes "dusk to dusk" changes in each performance the recorded voice of a narrator, tells the story of a twenty-four hour period in the metropolitan area. By techniques never combined in a theatrical production before, impulse-sound track equipment reproduces narration, background music and sound effects, synchronizing them with the animation and lighting effects of the diorama program. A special musical score was arranged by Josef Bonime and recorded for reproduction by an orchestra of 44 pieces under his direction.

A sequence of "display sculptures" will supplement the "City of Light" in offering a dramatic, three-dimensional "customers' report" on Consolidated Edison System operations. Thus free-standing exhibits will dramatize the quantity of the System's annual electric, gas and steam production. A purchaser exhibit will translate the System's annual steel, coal, copper, oil and other purchases into readily understood quantities. Another display tells Fair visitors that "To make New York the best served city, 300,000 investors have invested $1,200,000,000 in Consolidated Edison's plants and equipment." A tax exhibit dramatizes the tax payment of a million dollars a week by Consolidated Edison. A cost comparison exhibit indicates that whereas other living costs have risen the cost of electricity has declined during the past quarter century. Another exhibit shows "How Every Dollar of Your Service Bill is Used."

Carrying the "customers' report" theme further, an employee exhibit will suggest that an all-time high standard of living has been achieved by "Bill Jones," the average Consolidated Edison System employe, who typifies 37,000 employe-producers of electricity, gas and steam.

A 9000-square foot wall of water, in front of which will be displayed the first water ballet ever executed, the conception of a leading sculptor, will form the exterior of the Consolidated Edison exposition building. Together the water wall and ballet will provide a building facade said to be totally unlike anything ever produced before.

The June Convention

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and the Westinghouse exhibits and those of other manufacturers of electrical equipment.

The Convention program will include a tour of inspection through the Fair, which has set aside June 6 as Edison Electric Institute Day. Every effort will be made—from special transportation to personal guides—to make certain that delegates and their friends see everything pertaining to the electrical industry. There will be plenty of opportunity, too, for general sight-seeing and to take in entertainment features!

Tickets to the Fair Grounds will be provided delegates to attend the World's Fair session, to be held in the Music Hall in the Fair Grounds on Tuesday afternoon, June 6. This session is planned primarily as an introduction of delegates and the public to the electrical exhibits at the Fair. Among those who will make brief talks at this meeting are Messrs. A. H. Schoellkopf, president, Utilities Exhibit Corporation; Grover Whalen, President of the Fair; F. L. Carlisle; Owen D. Young of General Electric and D. S. Youngholm of Westinghouse. After the introductory talks, guided tours will be made to the several electrical exhibits.

On the same day a luncheon will be given at the Fair Grounds in honor of the ladies attending the Convention. Buses to the Fair Grounds will leave the Waldorf-Astoria promptly at 12 o'clock, for this event. After the luncheon, the ladies will repair to the Music Hall for the World's Fair Session.

The closing event of the Convention will be a luncheon meeting, Thursday, June 8, at the Waldorf. Speakers and entertainment at this event are to be announced.

Meeting of Subject Committee on Underground Methods and Accessories

THE symposium on IPCEA specifications and standards for varnished cambric and rubber insulated cable to be presented at the Edgewater Beach Hotel in Chicago on May 2, as announced in the March BULLETIN, will be given by Mr. W. A. DelMar, president of the IPCEA. Some of the subjects to be covered are as follows:

1. The forthcoming specifications for ozone resisting rubber.
2. Revision of the varnished cambric specification.
3. Revision of the specification for metallic coverings.
4. Research on segmental cables.
5. Research on cable shielding.
6. Research on water absorption by rubber.

The research work on the subjects mentioned has been conducted by IPCEA, preliminary to the establishment of standards and specifications for these items. It is hoped that there will be considerable discussion of these subjects by members of the EEI and other users of cable who may be present at the meeting.

The cows move into their quarters at The Electrified Farm, New York World's Fair.

The Electric Dollar

(*Continued from page* 180)

2. That story, properly told, can be all-powerful in solving part of our human relations problem;

3. Customer research or fact-finding is essential to the intelligent planning and organization of the right kind of sales story.

4. The customer appeal and romance of some of the minor services and appliances are as great, if not greater than the ones which from a selfish load-building point of view may hold first place in our minds.

5. The human relations problem, like others that have confronted our industry, is possible of solution with intelligent preparation, planning and execution.

In meeting the rather formidable problems before us today, there is much recompense to be had through a knowledge of the benefits and satisfaction of wants we can bestow upon our customers. When we extend our service to a home, "hot" up the line, we send through the wires more than electricity. Packed in every kilowatt-hour is comfort, convenience and entertainment advantages that help make a house a home.

Our lot in life may not encompass the sculpturing of a Venus De Milo, nor the painting of a Sistine Madonna, but it does involve the gratifying of innumberable human needs and wants. In the last analysis, I wonder if there is more important and satisfying creative work anywhere than that which we are carrying on—bringing blessings to living, working, hoping men and women in countless American homes.

Load Building With Kitchen Equipment

(*Continued from page* 172)

While it is true that the amount of load is small in an individual kitchen, the sale of good lighting in the kitchen makes for customer satisfaction and thus paves the way for better lighting in the rest of the home.

The present forecast is that 900,000 new homes will be built in the United States during 1939. This is a drab statement which arouses no more interest than if I had casually remarked that it seldom snows in Los Angeles. It is interesting to observe how just a little change in words brings into view an entirely different picture, like changing the lights on a backdrop. I said, "900,000 new homes will be built." Suppose we change this to read, "900,000 kitchens will be built in 1939." Does not that statement immediately challenge your attention? With some of the figures I have given you as part of the equation and this prospective total of 900,000 kitchens as another factor, can there be any other conclusion than one of tremendous opportunity for aggressive salesmanship whereby every branch of the industry as well as the general public will profit—the consumer, by being able to enjoy the full benefit that complete electric service will bring; the electrical contractor, by a vastly increased volume of electrical business; the manufacturer of electrical wiring and utilization devices, by the unlocking of the greatest potential market in the world; the utilities, through the opportunity of increased kilowatthour sales; and back to the consumer again because increased consumer use invariably results in lower unit cost per kilowatthour. We have in effect an endless chain, a merry-go-round on which everyone should ride, for everyone benefits. We are doing more than building load—we are bringing to our customers a modern service for which they are groping, but lacking some technical advice they fail to achieve. We are the domestic consumer's consulting engineer with an ethical obligation to make sound recommendations. Let's all make up our minds to do as good a job in bringing electric service into the kitchens of America as we have into its factories.

CONVENTIONS AND MEETINGS

	APRIL
1	Southeastern Electric Exchange, Ponce de Leon Hotel, St. Augustine, Fla.
3-4	Oklahoma Utilities Association, Tulsa Hotel, Tulsa, Okla.
6-7	Missouri Valley Electric Association, Engineering Conference, Kansas City, Mo.
10-11	Arkansas Utilities Association, Hot Springs National Park, Ark.
12-14	Missouri Association of Public Utilities, Muehlebach Hotel, Kansas City, Mo.
14	Maryland Utilities Association, Lord Baltimore Hotel, Baltimore, Md.
19-22	Northwest Electric Light and Power Association, Engineering and Operation Section, Olympic Hotel, Seattle, Wash.
20-21	American Gas Association, Accounting Conference, The Greenbrier, White Sulphur Springs, W. Va.
27-28	Missouri Valley Electric Association, Accounting Conference, Kansas City, Mo.
	MAY
1-4	Engineering Committees, Edison Electric Institute, Edgewater Beach Hotel, Chicago, Ill.
1-5	Annual short course and conference, Electric Meters and Relays, University of Florida, Gainesville, Fla.
2-4	Chamber of Commerce of the USA, Washington, D. C.
8-12	National Fire Protection Association, Chicago, Ill.
14-18	National Electrical Manufacturers Association, The Homestead, Hot Springs, Va.
17-19	Pacific Coast Electrical Association, Del Monte Hotel, Del Monte, Calif.
21-25	National Electrical Wholesalers Association, The Homestead, Hot Springs, Va.
22-25	National Association of Purchasing Agents, San Francisco, Calif.
26-27	Northwest Electric Light and Power Association, Accounting and Business Practice Section, Hotel Vancouver, Vancouver, B. C.
26-30	Westinghouse Agent-Jobbers Association, The Homestead, Hot Springs, Va.
	JUNE
6-8	EDISON ELECTRIC INSTITUTE, Waldorf-Astoria Hotel, New York, N. Y.
18-21	Public Utilities Advertising Association, New York, N. Y.
21-24	Canadian Electrical Association, Digby, N. S.
26-29	National Association of Cost Accountants, Atlantic City, N. J.
26-30	American Institute of Electrical Engineers, San Francisco, Calif.
	JULY
26-29	American Society of Civil Engineers, St. Francis Hotel, San Francisco, Cal.
	AUGUST
21-25	Illuminating Engineering Society, Hotel Fairmont, San Francisco, Cal.
	OCTOBER
2-6	National Restaurant Association, Chicago, Ill.
5	Third Annual Conference, Commercial Electric Cooking Council, Chicago, Ill.
9-12	American Gas Association, New York City, N. Y.
9-12	National Electrical Contractors Association, Bellevue-Stratford Hotel, Philadelphia, Pa.
16-20	National Safety Council, Atlantic City, N. J.
23-27	National Electrical Manufacturers Association, Palmer House, Chicago, Ill.